

Phase II Investigation Report

St. Louis Park FM, Site 2

Saint Louis Park, MN

MCES No. 804130
SEH No. MCES 123840

May 2013



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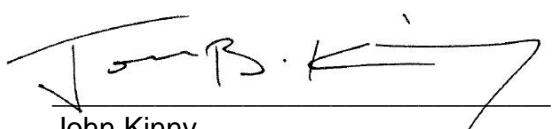
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Executive Summary

Short Elliott Hendrickson Inc. (SEH[®]) was retained by the Metropolitan Council Environmental Services (MCES) to conduct a Phase II Investigation for the project corridor associated with the St. Louis Park FM, Site 2 project (MCES Project No. 804130). The project corridor is located south of Trunk Highway 7 (TH 7) along West Lake Street in St. Louis Park, Minnesota. The project limits covered in this report begin approximately 150 feet east of Louisiana Avenue and continue 1800 feet to the east along West Lake Street.

MCES intends to remove, replace, and/or relocate portions of the existing forcemain within the project corridor depicted. The purpose of this Phase II is to investigate the project corridor for the presence, magnitude and extent of contaminated soil, groundwater, and waste that may be encountered during the construction.

Groundwater and soil contamination in the area of the project corridor is primarily impacted by the Reilly Site. Numerous additional sites upgradient from and adjacent to the project corridor have impacts from past industrial and commercial uses.

Depth to shallow groundwater in the project corridor ranges from approximately 3 to 24 feet below ground surface (bgs). The corresponding water elevations range from approximately 881 to 887.5 feet above mean sea level (amsl). It is assumed the peat and fine grained swamp deposits are somewhat confining. Water bearing sands were encountered perched above moist peat or below the peat with potentiometric elevations above the peat.

Groundwater samples collected from along West Lake Street indicate diesel range organics (DRO) and gasoline range organics (GRO) above the Minnesota Department of Health (MDH) generally accepted guideline. Additionally, benzene, ethylbenzene and naphthalene exceed MDH Groundwater Values (GWVs).

The shallow geology of the project corridor includes quaternary outwash and swamp deposits. The outwash and swamp deposits are typically overlain by sandy fill material. Swamp deposits encountered include peat and clay. Debris was not observed in fill material.

Impacts to soil within the project corridor are generally DRO, GRO, naphthalene, benzo(a)pyrene (BaP), and arsenic. The project corridor east of Louisiana Avenue and west of Monitor Street is adjacent to the present-day Sam's Club. BaP concentrations and equivalents, and arsenic exceed Tier 2 Industrial Soil Reference Values (SRVs). DRO exceeds the unrestricted reuse guideline by more than twenty times. According to the SEH 2011 investigation, benzene, ethylbenzene and naphthalene in groundwater at this location exceed MDH GWVs.

The project corridor east of Monitor Street and past Hampshire Avenue is located adjacent to the Highway 7 Business Center. BaP concentrations and equivalents, and arsenic exceed Tier 2 Industrial SRVs. According to previous investigations, DRO in groundwater exceeds the MDH generally accepted guideline

The eastern portion of the project corridor is adjacent to the electrical substation. No analytes exceed action levels in this segment of the project corridor.

SEH recommends that a Response Action Plan (RAP) be prepared to address impacted soil and groundwater that will be encountered during construction. The RAP should be submitted to the MPCA for approval.

List of Abbreviations

ACM	Asbestos Containing Material
AMSL	Above Mean Sea Level
AST	Above ground Storage Tank
ASTM	American Society for Testing and Materials
Braun	Braun Intertech
bgs	Below Ground Surface
CSAH	County State Aid Highway
DRO	Diesel Range Organics
EPA (USEPA)	Environmental Protection Agency (USEPA)
ESA	Environmental Site Assessment
GIS	Geographical Information System
GRO	Gasoline Range Organics
ICP-MS	Inductively Coupled Mass Spectrometry
MDH	Minnesota Department of Health
mg/kg	milligram per kilogram
MGS	Minnesota Geological Survey
MN	Minnesota
MnDOT	Minnesota Department of Transportation
MPCA	Minnesota Pollution Control Agency
NSP	Northern States Power
OES	Office of Environmental Stewardship
Pace	Pace Analytical Services, Inc.
Peer	Peer Engineering
Phase I	Phase I Environmental Site Assessment
Phase II	Phase II Environmental Subsurface Investigation
PID	Photo-Ionization Detector
ppm	Parts per million
QG	Quantity Generator
RCRA	Resource Conservation and Recovery Act
RCRA 8 Metals	List of 8 RCRA Metals, including Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver
RCRAGN	Resource Conservation and Recovery Act Generators
SEH	Short Elliott Hendrickson Inc.
SRV	Soil Reference Value
SVOC	Semi-Volatile Organic Compound
TCLP	Toxicity Characteristic Leaching Procedure
TH	Trunk Highway
TH 36	Trunk Highway 36
Tier 1 SRV	Tier 1 Residential SRV
Tier 1 SLV	Tier 1 Soil Leachate Value
Tier 2 SRV	Tier 2 Industrial SRV
VIC	MPCA Voluntary Investigation and Cleanup program
VOC	Volatile Organic Compounds
Xcel	Xcel Energy, Inc. (formerly NSP)
µg/L	Micrograms per Liter

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Phase II Investigation Report

St. Louis Park FM, Site 2

Prepared for the Metropolitan Council Environmental Services

1.0 Introduction

Short Elliott Hendrickson Inc. (SEH[®]) was retained by the Metropolitan Council Environmental Services (MCES) to conduct a Phase II Investigation (Phase II) for the St. Louis Park FM, Site 2 Project located along West Lake Street in St. Louis Park, Minnesota.

The project limits covered in this report begin approximately 150 feet east of Louisiana Avenue and continues 1800 feet to the east along West Lake Street. The area of interest will herein be referred to as “project area”, “project corridor” or “site”. MCES divided the St. Louis Park FM project into three sites: Site 1, Site 2, and Site 3. This Phase II examines the property along West Lake Street and the Frontage Road as described above. The site location is depicted on **Figure 1, “Site Location Map”**.

The St. Louis Park FM, Site 2 project corridor is located within portions of the Trunk Highway (TH) 7 and Louisiana Avenue interchange project area. Beginning in 2009 SEH completed a Phase I ESA, Phase II Investigation Work Plan and Phase II Investigation for the interchange project. This report utilizes data from previous SEH environmental investigations for the St. Louis Park FM, Site 2 project corridor.

1.1 Purpose

MCES intends to remove, replace, and/or relocate portions of the existing forcemain within the project corridor depicted on **Figure 1**. The purpose of this Phase II is to investigate the project corridor for the presence, magnitude and extent of contaminated soil, groundwater, and waste that may be encountered during the construction. MCES will use the findings from this investigation to manage environmental conditions that may be encountered during construction.

1.2 Scope of Work

This Phase II consisted of the following general tasks:

- Advancing soil boring and soil sampling and analysis.
- Collection of groundwater samples and analysis.
- Preparation of the Phase II report summarizing the geology, field observations, field screening results, site sampling and laboratory analytical results.

2.0 Site Background

2.1 Site Description

Figure 1 illustrates the location of the project corridor. The project corridor is located in the southeast quadrant of Township 117 N, Range 21 W and Section 17. The property is located in the City of St. Louis Park, Minnesota, in Hennepin County.

The proposed project is located in an urbanized first-tier suburb in the western Twin Cities metropolitan area. The project corridor is located south of TH 7 along West Lake Street, and includes portions of the Frontage Road and right-of-way. The project corridor is generally aligned east-west and is depicted with the proposed alignment and project corridor on **Figure 1**.

2.2 Site History

The project corridor is located in an area with an extensive history of past industrial activities and associated environmental impacts. From the early 1900s to the mid 1900s this area was industrial. The mid to late 1900s was a period of transition with industrial and commercial occupants in the area. Numerous investigations and cleanup activities have been performed on sites associated with past industrial uses. The following two large scale environmental impacts in the vicinity of the project corridor were identified:

- Reilly Tar/Republic Creosoting Works plant site (Reilly site)
- Environmental Protection Agency (EPA) Vapor Intrusion Investigation Area

2.3 Summary of Sites with Identified Environmental Concerns

In preparation for this project SEH completed a Modified Phase I Environmental Site Assessment (ESA) (SEH, April 2013). SEH followed Minnesota Department of Transportation (MnDOT) Office of Environmental Services (OES) guidelines for ranking environmental sites of concern. The Phase I ESA identified 11 high risk sites within the project corridor. The following definitions of “low”, “medium” and “high” environmental risk are standard categories utilized by MnDOT to rank sites within the a project corridor.

Low Environmental Risk – Hazardous and/or petroleum substances are known or inferred to have been, or are being used, stored or generated on these sites; however, there appear to be “good housekeeping” practices conducted on the site. Good housekeeping practices are defined as proper handling and/or storage of hazardous or petroleum substances. There is also no record or evidence of releases, surface contamination and/or subsurface contamination at the site.

Medium Environmental Risk – Hazardous substances are known or inferred to have been, or are being used, stored, or generated on these sites, and there appears to be “poor housekeeping” practices conducted at the site. Poor housekeeping practices are defined as improper handling and/or storage of hazardous or petroleum substances. All properties that have underground storage tanks (USTs) or above ground storage tanks (ASTs) and leaking underground storage tank (LUST) sites that have received closure from the Minnesota Pollution Control Agency (MPCA) and vehicle repair and maintenance facilities are also considered medium environmental risks.

High Environmental Risk – These are sites where hazardous and/or petroleum substances are known or inferred to have been, or are being used, stored, or generated, and there is a record or evidence that a spill, release, surface contamination and/or subsurface contamination has occurred. These sites include all active Voluntary Investigative and

Cleanup (VIC), Minnesota Environmental Response & Liability Act (MERLA), active LUST sites and all active and inactive dump sites.

The Phase II Investigation and soil boring locations are based on information gathered from the Phase I ESA, location of proposed construction activities, and site access. The Environmental sites of concern investigated for this report are summarized in **Table 1, “Boring Rational and Summary of Results”**. Low, medium, and high risk ranked sites included in the Phase I ESA are presented on **Figure 2 “Phase I ESA Site Features”**.

2.3.1 Phase I File Review Information

SEH reviewed reasonably ascertainable records from standard sources such as publicly-available federal, state, county and/or city records as appropriate to assist in identifying environmental concerns in connection with the project corridor.

3.0 Regional Physical Setting

3.1 Regional Geology

Surficial deposits in this area include quaternary outwash and swamp deposits. This area is an outwash plain of sandy soils derived from the Des Moines Lobe and Grantsburg Sublobe Wisconsin glaciation. The surface geology underlying the site consists of varying amounts of fill, outwash, and peat/muck. According to the Surficial Geology of the Twin Cities Metropolitan Area, Minnesota (Meyer 2007), glacial outwash consists of sand, gravelly sand, and gravel. The upper few feet in many places have been reworked by wind action and wind-blown loess is common at less than four feet thick. The peat includes fine grained organic matter and marl (calcareous clay) at depth in places. Deposits of alluvium are also present.

A north and south trending area of organic peat and muck is present across this area, crossing the intersection of TH 7 and Louisiana Avenue extending from West Lake Street to the east and Oregon Avenue to the west. This area represents a historic topographic low where organic deposits accumulated in marshy areas. Varying thicknesses of fill material overlie the quaternary deposits.

The peat and organic silt located just west of the site is roughly 5 to 20 feet thick. The peat deposits thin to absence to the east and west. Varying fill material is commonly present at the surface to varying depths with a rough average of ten feet. The depth to bedrock is roughly 75 to 100 feet below ground surface (bgs). The uppermost bedrock is the Platteville formation. The Platteville Formation is defined as fine grained dolostone and limestone underlain by the green, sandy shale of the Glenwood Formation.

3.2 Regional Hydrogeology

According to the Minnesota Geological Survey, *Geologic Atlas for Hennepin County, Minnesota* (MGS, 1989), shallow groundwater is encountered at around 890 feet above mean sea level (amsl). According to groundwater monitoring completed in the area, groundwater in the drift aquifer is flowing east with a slight southerly component.

4.0 Overview of Phase II Investigation

4.1 Scope and Rationale

The goal of this Phase II is to determine the extent of environmental impacts to soil and review previous groundwater studies along the project corridor. The scope of the subsurface investigation included three hollow stem auger soil borings, four shallow soil samples, and two Geoprobe® borings. The investigation included field screening soil for organic compounds and collecting soil samples for laboratory analysis. The results of soil screening and laboratory

analysis are used to evaluate impacts to the site. SEH also completed a review of the previous Phase II completed for the TH 7 and Louisiana Avenue interchange (SEH, February 2011) as well as an additional file review to identify potential impacts to the eastern extent of the project corridor. Boring locations are depicted on **Figure 3, “Boring Locations.”**

4.1.1 Sampling Rationale

SEH routinely collected multiple samples from each boring, including locations with field indications of impacts, at lithological changes, and from the bottom of borings. Rationale for sample analysis included:

- determining the types and magnitudes of environmental impacts,
- determining possible methods and procedures for disposal of impacted soils and groundwater,
- delineating the extent of impacts.

4.2 Field Investigation and Sampling Methods

The following sections describe the methods, procedures, and protocol used to conduct soil borings, soil sampling and groundwater sampling. Whenever possible and practical, the procedures were performed in accordance with MPCA guidelines.

4.2.1 Soil Borings

Soil borings were completed using Hollow Stem Auger (HSA), Geoprobe®, or hand auger. The HSAs were completed by Braun Intertec (Braun) and the Geoprosbes® by Thein Well. Geoprobe® borings were completed in general accordance with the EPA Standard Operating Procedure No. 2050, Model 5400 Geoprobe™ Operation. Each boring was properly abandoned and all borehole cuttings were thin spread and left on-site or containerized in 55 gallon drums for proper disposal. The location of each borehole is depicted on **Figure 3**.

4.2.2 Site Soil Sampling

Soil samples were collected using a steel rod and sampler advanced into the ground using hydraulic and/or hammer devices. Samplers were either four or five feet long and two inch diameter hollow, stainless steel cylinders (Macro-Core®). The soil samples were collected in a hollow acetate liner placed into the sampler and extruded once the sample was withdrawn from the subsurface. Soil samples were collected continuously at four or five feet intervals to the termination depth of the boring. A portion of each sample was reserved for description in the field in general conformance with ASTM D 2488. Boring logs were prepared for each soil boring and are included in this report as **Appendix A**.

Soil samples were collected from the spilt spoon or acetate liner for field screening and laboratory analysis. The acetate liner of each sample was cut open and the respective soil samples were placed into the appropriate jars for laboratory analysis. The SEH scientist wore a new clean pair of disposable Nitrile® gloves while collecting each sample. All remaining soil from each sample and borehole cuttings were left on-site. Sample containers were placed in coolers with ice and were protected from sunlight. Samples were transported to Pace Analytical Services (Pace) within 72 hours of their collection with proper chain-of-custody documentation.

Samples were collected for field screening from each boring. Soil samples collected were placed in a new, clean, quart-size, labeled, resealable bag. The bags used for field screening were used for one sample only. Soil clumps were manually agitated and the bags were shaken vigorously at the beginning and end of the headspace development period. The bags were allowed to volatilize in a sunny location. A MiniRae Photo-ionization detector with a 10.6 eV

hNu bulb calibrated to Isobutylene was inserted through a small opening in the bag and the highest reading was recorded.

The results of the field screening are documented on the SEH scientists' boring logs. Empty bag readings were recorded periodically throughout the investigation and are considered "background". Empty bags had readings ranging from 0 to 6 ppm.

Boring locations are labeled by the type of soil boring completed. Geoprobe® are labeled "GP" and HSAs are labeled "MC". Shallow surface samples collected with a hand auger are labeled SS. Samples collected were labeled corresponding to the boring number from which they were collected (for example GP-01). Additionally, soil samples were labeled for the depth from which they were collected (in feet bgs). For example, a sample collected from a two foot depth in GP-01 is labeled GP-01-2. Samples were collected from the interval ± 0.5 foot on either side of the noted sample depth.

4.2.3 Groundwater Sampling

Groundwater samples were collected through a PVC screen with polyethylene tubing and a peristaltic pump or check valve. The SEH scientist wore a new clean pair of disposable Nitrile® gloves while collecting each groundwater sample. The groundwater samples were placed in the appropriate laboratory containers in accordance with the laboratory's specifications. The sample containers were placed in a cooler with ice and protected from sunlight. The samples were then transported to Pace Analytical Services within 48 hours of their collection with proper chain-of-custody documentation.

Specific information on samples collected at each site (e.g. total number of samples collected, samples depths, etc.) is included within **Section 5.0 "Phase II Investigation Results"**.

4.3 Chemical Analytical Methodologies

The soil and groundwater samples were analyzed by Pace Analytical Services. The laboratory analytical methods and quality control data are included within the laboratory reports attached as **Appendix B**. Analytes were chosen based on likely impacts.

Soil sample analytes included:

- Diesel Range Organics (Wisconsin Method DRO)
- Gasoline Range Organics (Wisconsin Method GRO)
- Volatile Organic Compounds (EPA Method 8260B)
- Semi-Volatile Organic Compounds (Method 8270C)
- RCRA 8 Metals (EPA Method 7471A/6010B) (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver)
- Arsenic and Selenium (EPA Method 6020)

Groundwater analytes included:

- Diesel Range Organics (Wisconsin Method DRO)
- Gasoline Range Organics (Wisconsin Method GRO)
- Volatile Organic Compounds (EPA Method 8260B)
- Semi-Volatile Organic Compounds (Method 8270C)
- Dissolved RCRA 8 Metals (EPA Method 7471/6010B) (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver)

4.4 Notes on Analytical Methods

The following descriptions provide background information and terminology for DRO and GRO. Also included are a discussion of common laboratory contaminants under VOC and SVOC analysis and a comparison of arsenic and selenium EPA Method 6010 versus EPA Method 6020.

4.4.1 DRO

The Wisconsin DRO Method (DRO) is designed to measure mid-range petroleum products such as diesel or fuel oil. This method provides gas chromatographic conditions for the detection of semi-volatile petroleum fractions such as diesel, fuel oil #2, or kerosene. DRO analysis includes hydrocarbons within the range of C10 - C28 and a boiling point range between approximately 170°C and 430°C. Quantitation is based on a direct comparison of the total area within this range to the total area of the Diesel Component Standard. As defined in the method, other organic compounds, including chlorinated hydrocarbons, phenols, phthalate esters, polycyclic aromatic hydrocarbons (PAHs), kerosene, fuel oils and heavier oils are measurable. DRO results include these compounds/products. Components greater than C28 present in products such as motor oils or lubricating oils are detectable under the conditions of the method (Wisconsin DNRa, September 1995).

4.4.2 Silica Gel Clean-up

DRO samples may be complicated by biogenic interference which includes materials such as naturally occurring organics. These concentrations may occur at levels well above the regulatory limit.

Silica gel cleanup is a well established analytical procedure used to separate analytes of different polarity. The majority of “fresh” or non-biodegraded petroleum hydrocarbons are considered non-polar compounds. Depending upon the soil makeup, the majority of the biogenic compounds may be polar or semi-polar in nature. The silica gel cleanup procedure will preferentially remove polar and semi-polar compounds, thus leaving the non-polar or petroleum hydrocarbons behind.

The clean up procedure typically takes place after the initial DRO extract has been analyzed and the client evaluates the results. It is important that the original extract be used to minimize the variable of non-homogeneous samples. The original extract is taken back to the laboratory for cleanup and re-injected along with the batch QC samples. Both “before and after” results are reported (Pace, October 2007)

4.4.3 GRO

The Wisconsin GRO Method (GRO) is designed to measure the concentration of GRO in water and soil. GRO analysis includes hydrocarbon within the range of C6 - C10 and a boiling point range between approximately 60°C and 220°C. (All the chromatographic response falling between the onset of the methyl-tertiary-butyl ether peak and the conclusion of the naphthalene peak). Quantitation is based on a direct comparison of the total area within this range to the total area of the Gasoline Component Standard. As defined in the method, other organic compounds, including chlorinated solvents, ketones, ethers, mineral spirits, stoddard solvents, and napthas are measurable. GRO results include these compounds/products: petroleum fractions such as gasoline, stoddard solvent, or mineral spirits.

High levels of heavier petroleum products such as diesel fuel may contain some volatile components producing a response within the retention time range for GRO. Other organic

compounds, including chlorinated solvents, ketones, and ethers are measurable. As defined in the method, the GRO results include these compounds (Wisconsin DNRb, September 1995).

4.4.4 Benzo(a)pyrene Equivalents

The MPCA uses Potency Equivalency Factors (PEFs) to evaluate toxicity and to assess risks of carcinogenic PAHs. A PEF is a relative estimate of toxicity of chemical compared to a reference chemical. Benzo(a)pyrene was chosen as a reference chemical for carcinogenic PAHs because its toxicity is well characterized. A table developed by the MPCA used to calculate benzo(a)pyrene equivalents (BaPs) is used in this report. Per MPCA recommendation, “zero” is used for non-detected analytes in the BaP calculation (MPCA June 2011).

4.4.5 Common Laboratory Contaminants

In the process of having samples prepared and tested in a laboratory, contaminants may be introduced in the process resulting in false positive results for select organic compounds (EPA July 2006). These compounds may be introduced into the sample by several different means including, but not limited to, laboratory cleaning methods and sample preparation procedures. If detected in samples, these compounds should be compared to corresponding blank sample results to ensure that the compound detected is a valid detection. Common VOC laboratory contaminants include:

- Methylene chloride
- Acetone
- 2-Butanone
- Chloroform

Common Phthalate contaminants are also identified as potential SVOC laboratory contaminants. These include:

- Bis(2-ethylhexyl)phthalate
- Diethyl phthalate
- Benzyl phthalate
- N-butyl phthalate
- N-octyl phthalate

Once again, sources of contaminants may vary and may include laboratory solvents and water, powdered gloves, and laboratory and field equipment (EPA July 2006).

4.4.6 Arsenic and Selenium EPA Method 6010 versus EPA Method 6020

All metals were initially tested using EPA method 6010 which is an inductive coupled plasma- atomic emission spectrometry (ICP-AES) method. Results using method 6010 which slightly exceeded MPCA SRV or SLVs for selenium and/or arsenic were retested using EPA method 6020 (inductive coupled plasma-mass spectrometry (ICP-MS)). The 6010 method has slightly higher detection limits and more potential for interference with other compounds, in particular for arsenic and selenium at low levels compared to the 6020 method. Examples of compounds which can cause interference/higher results using method 6010 for arsenic include aluminum, chromium and vanadium. Compounds which can cause interference/higher results using method 6010 for selenium include aluminum and iron. While method 6020 also has potential interference issues when testing for arsenic and selenium, the interference is usually not as significant as that using method 6010. Potential interfering compounds using method 6020 include chlorine, calcium, sulfate, and bromine. In

summary, results using method 6020 are being used to guide decisions for samples that had slight exceedances of arsenic or selenium using method 6010.

4.5 Quality Assurance/Quality Control

Pace is a Minnesota-certified laboratory and have a current Quality Assurance/Quality Control (QA/QC) manual on file with the Minnesota Department of Health (MDH) and the Minnesota Pollution Control Agency (MPCA). A QA/QC report “Project Narrative” is attached near the beginning of each Pace laboratory report (**Appendix B**). The QA/QC report includes:

- General information
- Hold time
- Sample preparation
- Initial calibrations
- Continuing calibrations
- Surrogates
- Method blanks
- Laboratory control spikes
- Matrix spikes
- Duplicate samples
- Additional comments

Data qualifiers have been added to the soil table for results based on review of the data and laboratory QA/QC results.

4.6 Soil and Groundwater Reference Values

To evaluate the magnitude of impacts, analytical results are compared to MPCA Reference Values and MDH Groundwater Values (GWVs). Soil results are compared to MPCA Tier 1 Residential Soil Reference Values (Tier 1 SRVs), Tier 1 Soil Leachate Values (Tier 1 SLVs), and Tier 2 Industrial Soil Reference Values (Tier 2 SRVs). Total concentrations are compared to the accepted guideline of twenty times the EPA hazardous levels for toxicity (40 CFR 261.24 Table 1).

MDH GWVs are used as a proxy for evaluating the impacts to groundwater. However, for construction purposes the actionable limits for groundwater dewatering discharge would be established in the issued discharge permits from the MPCA NPDES/SDS program and/or MCES.

The MPCA has defined limits for DRO and GRO in the Guidance Document c-rem1-01, “Best Management Practices for the Off-Site Reuse of Unregulated Fill” (MPCA, February 2012) of 100 mg/kg in soil.

4.6.1 Notes on Regulatory Levels for Soil

In some cases, metals occurring naturally in soil exceed the action levels set in the Tier 1 SRVs, Tier 1 SLVs and Tier 2 SRVs. According to the MPCA, naturally occurring concentrations of metals in soil are not considered impacted in the absence of a contaminant source. The following summarizes the generalized naturally occurring levels of metals in soil as defined by the EPA in mg/kg or ppm in comparison to the MPCA Tier 1 and Tier 2 SRVs (Source: US EPA Office of Solid Waste and Emergency Response, Hazardous Waste and Land Treatment, SW-874 (April 1983).

Analyte	Common Range	Average	Tier 1 SRV	Tier 2 SRV
Arsenic	1-50	5	9	20
Barium	100-3000	430	1100	18000
Cadmium	0.01-0.7	0.06	25	200
Chromium	1-1000	100	87	650
Copper	2-100	30	100	9000
Lead	2-200	10	300	700
Mercury	0.01-0.3	0.03	0.5	1.5
Molybdenum	0.2-5	2	None	None
Nickel	5-500	40	560	2500
Selenium	0.1-2	0.3	160	1300
Silver	0.01-5	0.05	160	1300
Zinc	10-300	50	8700	75000

All units reported in mg/kg or ppm.

The values stated above are generalized ranges throughout the United States. Variations occur across soil types and parent material. Site-specific background levels of metals in soil were not evaluated during this investigation. Therefore, Tier 1 and Tier 2 SRVs for metals are used as actionable levels for this project.

4.6.2 Regulatory Action Levels vs. Laboratory Reporting Limits

Tables of analytical results attached to this report include only detected parameters. In some cases, laboratory reporting limits are greater than the Tier 1 SLV regulatory limits. If a parameter is not detected in any sample, the parameter is not included on the attached tables. In most cases, the sample extract could not be concentrated to the routine final volume or the parameter recovery in the laboratory control sample exceeded QC limits resulting in elevated reporting limits. However, these parameters are not considered contaminants of concern for the project corridor and are not discussed further in this report.

In some cases groundwater samples have parameters in which the laboratory reporting limit is greater than the MDH regulatory limit. If a parameter is not detected in a sample it is not considered a contaminant of concern. Therefore they are not discussed further in this report. The MDH GWVs are drinking water standards and are used as a proxy for evaluating impacts to groundwater. For construction purposes the actionable limits for groundwater dewatering discharge would be established in the issued discharge permits from the MPCA NPDES/SDS program and/or MCES.

5.0 Phase II Investigation Results

Geologic logging and field screening was conducted on the twelve borings completed for the project corridor. Select samples were submitted for laboratory analysis. The following sections detail the results of the investigation. Detailed information including boring logs and laboratory reports may be found in **Appendix A**, and **Appendix B**, respectively.

5.1 Overview

Twelve boring locations were chosen based on site observations, historical use of the site, accessibility/utility locations, and previous data collected. Sites and rankings identified in the Phase I ESA completed by SEH are presented on **Figure 2**. Boring locations are presented **Figure 3**. **Table 1** summarizes the borings, rationale, and results of the investigation.

5.1.1 Results of Geologic and Hydrogeologic Site Investigation

5.1.1.1 Geology

The surface geology underlying the site consists of varying amounts of fill, outwash, and swamp deposits of peat/muck. The depth of fill across the site varies from 4 to 14 feet in thickness. Fill material generally consists of fine to medium grained sand with varying amounts of silt, clay and gravel. Fill is generally loose, moist, and light to dark brown. Fill generally does not contain debris. Peat includes fine-grained organic matter and marl (calcareous clay) at depth in places. Deposits of alluvium are also present.

5.1.1.2 Hydrogeology

Depth to shallow groundwater ranges from approximately 3 to 24 feet bgs. The corresponding water elevations range from approximately 881 to 887.5 feet amsl across the project corridor. It is assumed the peat and fine grained swamp deposits are somewhat confining. Water bearing sands were encountered perched above moist peat or below the peat with potentiometric elevations above the peat.

5.2 2011 and 2012 Results of Field Screening and Laboratory Analysis of Soil

The following discussion is organized by location along the project corridor. The segments discussed include:

- Between Louisiana Avenue and Monitor Street
- East of Monitor Street past Hampshire Avenue
- Eastern Extent of Project Corridor

The purpose of this organization is to facilitate conceptual understanding of impacts that may be encountered during construction in these areas. Boring locations completed by SEH in 2011 (SEH, January 2012) and 2012 are depicted on **Figure 3**. The 2011 and 2012 direct push probe boring locations are identified as “GP,” the 2012 hollow stem auger locations are identified as “MC,” and the 2012 surface sample locations are identified as “SS.” Soil analytical results for this investigation are presented on **Table 3, “2011 Soil Analytical Results”** and **Table 4, “2012 Soil Analytical Results”**. The complete laboratory reports are available as **Appendix B**.

5.2.1 Between Louisiana Avenue and Monitor Street

This portion of the project corridor is located south of a well house that reportedly treats groundwater for PAHs and phenyl associated with the Reilly site. South of the project corridor is the former Cardinal IG site which has historically been used as a body shop and auto repair shop since at least 1962, and was an acetylene gas manufacturer prior to that. Calcium hydroxide impacted soil was reportedly placed on-site by the former acetylene gas manufacturer. The site is currently Sam's Club; a conditionally exempt very small quantity generator of lead, corrosive waste and ignitable waste with gasoline storage tanks.

5.2.1.1 Results of the Soil Quality Investigation

Boring GP-18 was completed to 20 feet bgs. Fill material was encountered to 4 feet bgs. Apparent naphthalene odors were noted between 17 and 20 feet bgs. PID headspace results did not exceed 7.3 parts per million (ppm) in this boring.

5.2.1.2 Analytical Soil Results

One sample, GP-18-6, was collected and select samples were analyzed for VOCs and SVOCs. All analytes are non-detect. One additional shallow soil sample (SS-05-1.5) was

collected from 1.5 feet bgs at SS-05 and analyzed for lead. Lead is present at 24.7 mg/kg below the 20x TCLP Hazardous Limit of 100 milligrams per liter (mg/L).

5.2.2 East of Monitor Street past Hampshire Avenue

This portion of the project corridor is located north of a former auto parts manufacturing site (National Lead Industries/Taracorp/Golden Auto) and south of a former lawnmower repair shop. The former auto parts manufacturing site is currently the Highway 7 Business Center. National Lead was a metal refining and re-fabricating site listed for the following contaminants: sulfates, dissolved solids, lead, battery fragments, lead-bearing debris and slag. The source of on-site contamination was the discharge of liquid waste through the process sewers which ran to the municipal sewer system from lead smelting. Large amounts of lead slag from the plant's early operations were buried in a part of the site later occupied by Golden Auto Parts.

5.2.2.1 Results of the Soil Quality Investigation

Borings and surface samples (listed from west to east) SS-06, GP-33, GP-25, GP-34, MC-08, MC-03 and GP-26 were completed and collected for this area. Borings GP-25, MC-08, MC-03 and GP-26 were completed between 20 and 30 feet bgs and north of West Lake Street. Fill material was encountered up to 24 feet bgs. Apparent naphthalene, chemical or organic odors were noted from 5 to 8 and 17 to 27.5 feet bgs in the area north of West Lake Street; though PID headspace readings ranged from 0.0 to 17.7 ppm.

5.2.2.2 Analytical Soil Results

Additional borings and sampling within the roadway and on the right-of-way south of West Lake Street include GP-33, GP-34 and SS-06. Borings GP-33 and GP-34 were completed to 4 and 8 feet bgs respectively. Road base material was encountered to approximately 2 or 3 feet bgs and fill was encountered up to 8 feet bgs. Coal, brick and dark gray/black gravel and sand was encountered at the base of the boring GP-33.

Ten soil samples were collected from this area and analyzed for DRO, GRO, VOCs, SVOCs, PCBs, lead and/or RCRA 8 metals.

- BaP at 5.9 mg/kg exceeds the Tier 2 Industrial SRV of 3 mg/kg in sample MC-08-04; the calculated BaP equivalent of 8.2 also exceeds the Tier 2 Industrial SRV of 3 mg/kg. No other BaP concentrations or equivalents exceed action levels in this area. Arsenic at 41.4 mg/kg in sample GP-25-6 exceeds the Tier 2 Industrial SRV of 20 mg/kg.
- DRO up to 2630 mg/kg from samples collected from boring MC-08 exceed the unrestricted re-use guideline of 100 mg/kg.
- Arsenic up to 41.4 mg/kg exceeds the Tier 2 Industrial SRV of 20 mg/kg; however, arsenic was detected in soil site-wide and is considered background.

Additional detected inorganic compounds, barium, cadmium, chromium, selenium and lead do not exceed action levels. Detected concentrations are summarized on **Table 3** and **Table 4**.

5.2.3 Eastern Extent of the Project Corridor

This portion of the project corridor is located north of the St. Louis Park Substation – Northern States Power site and Minnesota Standard Showplace. Around 280 gallons of transformer mineral oil and PCBs were released over several reported spills at the substation. Minnesota Standard Showplace has had a pump and treat system operating on site due to a leaking underground storage tank.

5.2.3.1 Results of the Soil Quality Investigation

Boring MC-04 was completed to 21 feet bgs where fill material was encountered to 9 feet bgs. Additionally, two shallow soil samples were collected from 1.5 feet bgs at SS-07 and SS-08. PID headspace readings do not exceed 0.0 ppm.

5.2.3.2 Analytical Soil Results

Two samples were collected from the boring and analyzed for DRO, GRO, VOCs, SVOCs, PCBs and RCRA 8 metals. Sample MC-04-2.5 was also analyzed for arsenic using inductively coupled plasma mass spectrometry (ICP-MS) and TCLP for lead. Samples SS-07-1.5 and SS-08-1.5 were analyzed for lead.

- Lead in sample MC-04-2.5 at 112 mg/kg exceeds the 20x Hazardous Threshold of 100; however, the lead TCLP result of 0.094 mg/L is well below the EPA TCLP Hazardous level of 5.0 mg/L. Lead concentrations do not exceed Tier 1 Residential SRVs.
- Arsenic up to 41.4 mg/kg exceeds the Tier 1 Residential SRV of 20 mg/kg; however, arsenic was detected in soil site-wide and is considered background. Barium, cadmium and chromium concentrations are below action levels.
- DRO is present at 22.3 mg/kg in sample MC-04-2.5. No other analytes were detected in these samples.

5.3 2011 Groundwater Results

Groundwater samples were collected from borings GP-18, GP-25 and GP-26 during the 2011 investigation (SEH, January 2012). Samples were analyzed for DRO, GRO, SVOCs, VOCs, and RCRA metals. Groundwater analytical results are summarized on **Table 5, “Groundwater Analytical Results”** and are summarized, in micrograms per liter ($\mu\text{g}/\text{L}$), below.

- Analytes which exceed action levels include benzene (153 $\mu\text{g}/\text{L}$), ethylbenzene (75.6 $\mu\text{g}/\text{L}$) and naphthalene (5,980 $\mu\text{g}/\text{L}$) in GP-18-3W. Their respective action levels are 2 $\mu\text{g}/\text{L}$, 50 $\mu\text{g}/\text{L}$ and 300 $\mu\text{g}/\text{L}$. DRO and GRO are also present in this sample at concentrations of 11,700 $\mu\text{g}/\text{L}$ and 4,230 $\mu\text{g}/\text{L}$, respectively. The generally accepted guideline for DRO and GRO in groundwater is 200 $\mu\text{g}/\text{L}$.
- DRO is also present in sample GP-26-23W at 220 $\mu\text{g}/\text{L}$.

Additional SVOCs and VOCs, as well as barium, were detected at concentrations below action levels in groundwater along the project corridor.

6.0 Conclusions

Groundwater and soil contamination in the area of the project corridor is primarily impacted by the Reilly Site. Numerous additional sites upgradient from and adjacent to the project corridor have impacts from past industrial and commercial uses.

Depth to shallow groundwater in the project corridor ranges from approximately 3 to 24 feet below ground surface (bgs). The corresponding water elevations range from approximately 881 to 887.5 feet above mean sea level (amsl). It is assumed the peat and fine grained swamp deposits are somewhat confining. Water bearing sands were encountered perched above moist peat or below the peat with potentiometric elevations above the peat.

Groundwater samples collected from along Lake Street indicate DRO and GRO above the MDH generally accepted guideline. Additionally, benzene, ethylbenzene and naphthalene exceed MDH GWVs.

The shallow geology of the project corridor includes quaternary outwash and swamp deposits. The outwash and swamp deposits are typically overlain by sandy fill material. Swamp deposits encountered include peat, clay, and alluvium. Debris was not observed in fill material.

Impacts to soil within the project corridor are generally DRO, GRO, naphthalene, BaP, and metals (arsenic, lead, and chromium). The project corridor east of Louisiana Avenue and west of Monitor Street is adjacent to the present-day Sam's Club. BaP concentrations and equivalents, and arsenic exceed Tier 2 Industrial SRVs. DRO exceeds the unrestricted reuse guideline by more than twenty times. According to the SEH 2011 investigation, benzene, ethylbenzene and naphthalene in groundwater at this location exceed MDH GWVs.

The project corridor east of Monitor Street and past Hampshire Avenue is located adjacent to the Highway 7 Business Center. BaP concentrations and equivalents, and arsenic exceed Tier 2 Industrial SRVs. According to previous investigations, DRO in groundwater exceeds the MDH generally accepted guideline.

The eastern portion of the project corridor is adjacent to the electrical substation. No analytes exceed action levels in this segment of the project corridor.

7.0 Recommendations

A Response Action Plan (RAP) should be prepared to address impacted soil and water that will be encountered during construction. The RAP should be submitted to the MPCA for approval.

8.0 References

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Glossary for Tables

Abbreviations:

<x - indicates analyte concentration not detected above the laboratory reporting limit (unless otherwise noted)
20x TCLP Haz. Limit - Twenty times higher than the Toxicity Characteristic Leaching Procedure hazardous limit comparing parts per million
bgs - below ground surface
DRO - Diesel Range Organics
GP - geoprobe boring
GRO - Gasoline Range Organics
GW - groundwater
MDH GWV - Minnesota Department of Health Groundwater Value
NA - analysis not performed
NE - standard not established for corresponding analyte
PID - Photoionization Detector
RCRA 8 Metals - Resource Conservation and Recovery Act Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver)
SVOC - Semi-Volatile Organic Compounds
VOC - Volatile Organic Compounds
TCLP - Toxicity Characteristic Leaching Procedure

ft - feet

ppm - parts per million

µg/L - micrograms per liter

mg/kg - milligrams per kilogram

Tier 1 SLV - Minnesota Pollution Control Agency Soil Leaching Values for Residential properties

Tier 1 SRV - Minnesota Pollution Control Agency Soil Reference Values for Residential properties

Tier 2 SRV - Minnesota Pollution Control Agency Soil Reference Values for Industrial properties

EPA TCLP Hazardous Level - Environmental Protection Agency hazardous levels for toxicity (40 CFR 261.24 Table 1)

Exceeds EPA Hazardous Levels
<i>Exceeds Tier 1 Soil Leachate Values</i>
<u>Exceeds Tier 1 Residential SRV</u>
Exceeds Tier 2 Industrial SRV

Notes:

Sample ID is listed as: investigation type - identification number - depth

All depths are reported in feet below ground surface (bgs) and listed after the boring identification number

All PID results are reported in ppm calibrated to isobutylene equivalents with a 10.6 eV bulb

Soil analytical methods include:

PCBs by 8082 (mg/kg)

TCLP VOCs by 8260 (µg/L)

TCLP Metals by 6010 (µg/L)

DRO/GRO by Wisconsin Method (mg/kg)

SVOCs by EPA Method 8270 MDH List (mg/kg)

VOCs by EPA Method 8260 MDH List (mg/kg)

RCRA Metals by 6010/7471 (mg/kg)

Groundwater analytical methods include:

DRO/GRO by Wisconsin Method (µg/L)

VOCs by EPA Method 8260 MDH List (µg/L)

SVOCs by 8270 (µg/L)

RCRA Metals by EPA Method 7471A/6010B/6010/7470, 200.7 or 245.1 (µg/L)

Table 1
Boring Rational and Summary of Results
St. Louis Park FM, Site 2
St. Louis Park, Minnesota

Boring	Site ID	Site Name	Rationale for Location*	Total Depth (ft bgs)	Elevation (ft msl)	Field Notes	Elevated PID Readings	Soil Sample Depth(s) (ft bgs)	Analytical Summary
GP-18	5	Sam's Club Store/Fueling Station	Long industrial history/buried byproducts, filling station, active VIC/Brownfield, open LUST, active UST, RCRA SGN NLR. Located down gradient of the Reilly site.	20	888	Fill to 4' bgs.	None	6	No exceedances in soil. DRO, GRO not analyzed. DRO, GRO, Benzene Ethylbenzene and Naphthalene exceed regulatory guidelines in groundwater.
SS-05				NA	NA	Shallow surface sample	NA	1.5	No exceedances. Sample analyzed for lead only.
SS-06	8	Office Building	EPA/State Brownfield, Environmental Covenant, inactive VIC, closed LUST, closed Spills, Removed USTs, RCRA VGN, delisted NPL/PLP. Located down gradient of the Reilly site.	NA	NA	Soil Sample	NA	1.5	No exceedances. Sample analyzed for RCRA metals only.
GP-33				8	NA	Fill to termination depth of boring. Old road base and concrete material observed to 8' bgs	None	4, 8	No exceedances. Sample analyzed for RCRA metals only.
GP-25				24	897	Fill from 0.5-14' bgs.	12-14' MAX=10.1 ppm	6	Arsenic = 41.4 mg/kg.
MC-08				26	901	Fill to 14' bgs.	NA	4, 7.5	BaP = 5.9 mg/kg, BaP equivalent = 8.2 mg/kg.
GP-34				4	NA	Fill to termination depth of boring. Coal material observed at 3.7 to 4' bgs.	None	4	No exceedances. Sample analyzed for SVOCs and lead only.
GP-26				30	905	Fill to 24' bgs.	1' MAX=17.7 ppm	4	No exceedances.
MC-03				21	904	Fill to 4' bgs.	NA	2, 7	No exceedances.
MC-04	9	Excel Energy Electrical Substation	Inactive Brownfield, removed AST, Closed Spills, ERNS. Located down gradient of the Reilly site and within the EPA Vapor Intrusion Investigation Area.	21	913	Fill to 9' bgs.	NA	2.5, 8	Arsenic = 12.3 mg/kg.
SS-07				NA	NA	Shallow surface sample	NA	1.5	No exceedances. Sample analyzed for lead only.
SS-08	10	Restwell Mattress Factory and SPS Showplace	Inactive VIC, closed LUST, RCRA NLR. Located down gradient of the Reilly site.	NA	NA	Shallow surface sample	NA	1.5	No exceedances. Sample analyzed for RCRA metals only.

*Modified Phase I Environmental Site Assessment St. Louis Park FM Site 2, SEH 2012

Table 2
Photoionization Detector (PID) Results
St. Louis Park FM, Site 2
Saint Louis Park, Minnesota

2011				
Depth	GP-6	GP-18	GP-25	GP-26
0 to 2	3.9	3.6	5.4	17.7
2 to 4	6.6	3.4	9.2	15.3
4 to 6	58.9	4.1	8.4	15.1
6 to 8	58.9	2.6	5.9	10.6
8 to 10	38.6	2.3	9.3	11.8
10 to 12	105	3.7	6.7	10.8
12 to 14	27.0	3.2	10.1	8.0
14 to 16	83.1	3.4	9.2	11.1
16 to 18	60.2	2.7	9.0	10.5
18 to 20	60.8	7.3	6.2	7.9
20 to 22	176		4.0	9.8
22 to 24	80.3		4.8	7.5
24 to 26				13.1
26 to 28				12.2
28 to 30				12.6

2012				
Depth	MC-01	MC-03	MC-04	MC-08
0 to 1.5	0.0	0.0	0.0	0.0
1.5 to 3	0.0	0.0	0.0	0.0
4 to 5.5	26.8	0.0	0.0	0.0
6.5 to 8	30.1	0.0	0.0	0.0
9 to 10.5	30.3	0.0	0.0	0.0
11.5 to 13	31.4	0.0	0.0	0.0
14 to 15.5	28.6	0.0	0.0	0.0
16.5 to 18	27.8	0.0	0.0	0.0
19 to 20.5	28.4	0.0	0.0	0.0

2012				
Depth	GP-6	GP-18	GP-25	GP-26
0 to 2	3.9	3.6	5.4	17.7
2 to 4	6.6	3.4	9.2	15.3
4 to 6	58.9	4.1	8.4	15.1
6 to 8	58.9	2.6	5.9	10.6
8 to 10	38.6	2.3	9.3	11.8
10 to 12	105	3.7	6.7	10.8
12 to 14	27.0	3.2	10.1	8.0
14 to 16	83.1	3.4	9.2	11.1
16 to 18	60.2	2.7	9.0	10.5
18 to 20	60.8	7.3	6.2	7.9
20 to 22	176		4.0	9.8
22 to 24	80.3		4.8	7.5
24 to 26				13.1
26 to 28				12.2
28 to 30				12.6

Notes:

All headspace results are reported in parts per million (ppm)
recorded on a 10.6eV bulb MiniRAE PID calibrated to Isobutylene.
All depths are reported in feet below ground surface.

Bold results are greater than 10 ppm.

Empty bag readings are between 4 and 6 ppm.

NR - No recovery.

 Bottom of boring completed above this interval.

Table 3
2011 Soil Analytical Results
St. Louis Park FM, Site 2
Saint Louis Park, Minnesota

Parameter	Tier 1 SLV	20X TCLP Haz. Limit	Tier 1 Residential SRV	Tier 2 Industrial SRV	GP-18-06	GP-25-06	GP-26-04
Other (mg/kg)							
Diesel Range Organics	NE	NE	NE	NE	NA	NA	<9.0
Diesel Range Organics with Silica Gel Clean-up	NE	NE	NE	NE	NA	NA	NA
Gasoline Range Organics	NE	NE	NE	NE	NA	NA	<5.6
PCBs (mg/kg)							
All PCBs	2.1	50	1.2	8	NA	NA	<0.036
Metals (mg/kg)							
Arsenic	15.1	100	9	20	NA	41.4	2.8
Barium	842	2000	1100	18000	NA	46.4	20.6
Cadmium	4.4	20	25	200	NA	1.9	0.066
Chromium	18	100	NE	NE	NA	10.1	5.2
Lead	525	100	300	700	NA	9.7	5.8
Mercury	1.6	4	0.5	1.5	NA	0.12	<0.022
Selenium	1.5	20	160	1300	NA	<0.73	<0.79
Silver	3.9	100	160	1300	NA	<0.48	<0.52
Semi-VOCs (mg/kg)							
1-Methylnaphthalene	NE	NE	NE	NE	<1.6	<0.36	<0.37
2-Methylnaphthalene	NE	NE	100	369	<1.6	<0.36	<0.37
Anthracene	942	NE	7880	45400	<1.6	<0.36	<0.37
Benz(a)anthracene	NE	NE	NE	NE	<1.6	<0.36	0.68
Benzo(a)pyrene	NE	NE	2	3	<1.6	<0.36	0.75
Benzo(b)fluoranthene	NE	NE	NE	NE	<1.6	<0.36	1.1
Benzo(g,h,i)perylene	NE	NE	NE	NE	<1.6	<0.36	0.53
Benzo(k)fluoranthene	NE	NE	NE	NE	<1.6	<0.36	0.44
Chrysene	NE	NE	NE	NE	<1.6	<0.36	0.83
Dibenzofuran	NE	NE	104	810	<1.6	<0.36	<0.37
Fluoranthene	295	NE	1080	6800	<1.6	<0.36	1.3
Fluorene	47	NE	850	4120	<1.6	<0.36	<0.37
Indeno(1,2,3-cd)pyrene	NE	NE	NE	NE	<1.6	<0.36	0.47
Naphthalene	7.5	NE	10	28	<1.6	<0.36	<0.37
Phenanthrene	NE	NE	NE	NE	<1.6	<0.36	0.52
Pyrene	272	NE	890	5800	<1.6	<0.36	1.2
Benzo(a)pyrene Equivalents	NE	NE	2	3	0	0	1.0
VOCs (mg/kg)							
1,2,4-Trimethylbenzene	NE	NE	8	25	<0.25	<0.054	<0.057
1,3,5-Trimethylbenzene	NE	NE	3	10	<0.25	<0.054	<0.057
Ethylbenzene	4.7	NE	200	200	<0.25	<0.054	<0.057
Naphthalene	7.5	NE	10	28	<1.0	<0.22	<0.23
p-Isopropyltoluene	NE	NE	NE	NE	<0.25	<0.054	<0.057
Xylene (Total)	45	NE	45	130	<0.76	<0.16	<0.17

Notes:

<x: Indicates analyte concentration not detected above the laboratory reporting limit.

NA: Analysis not performed

NE: Standard not established for this analyte

mg/kg - milligrams per kilogram

Exceeds 20 X the TCLP hazardous limit (EPA)
Exceeds Tier 1 Soil Leachate Values (MPCA)
Exceeds Tier 1 Residential Soil Reference Value (MPCA)
Exceeds Tier 2 Industrial Soil Reference Value (MPCA)

Table 4
2012 Soil Analytical Results
St. Louis Park FM, Site 2
Saint Louis Park, Minnesota

Parameter	20xTCLP Haz. Limit^	Tier 1 SLV	Tier 1 Residential SRV	Tier 2 Industrial SRV	MC-03-02	MC-03-07	MC-04-2.5	MC-04-08	MC-08-04	MC-08-7.5	SS-05-1.5	SS-06-1.5	SS-07-1.5	SS-08-1.5	GP-33-04	GP-33-08	GP-34-04
DRO (mg/kg)																	
Diesel Range Organics	NE	NE	NE	NE	45.6	<7.8	22.3	<7.5	160	2630	NA	NA	NA	NA	NA	NA	NA
GRO (mg/kg)																	
Gasoline Range Organics	NE	NE	NE	NE	<5.2	<5.1	<5.7	<5.1	<5.2	<5.8	NA	NA	NA	NA	NA	NA	NA
Arsenic by 6020 (mg/kg)																	
Arsenic	100	15.1	9	20	NA	NA	5.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals 6010B (mg/kg)																	
Arsenic	100	15.1	9	20	7.2	5.0	12.3	5.2	7.5	1.5	NA	12.3	NA	NA	NA	2.4	NA
Barium	2000	842	1100	18000	43.0	28.1	86.2	29.4	30.4	24.4	NA	26.9	NA	NA	NA	41.4	NA
Cadmium	20	4.4	25	200	<0.043	<0.040	0.93	<0.039	0.19	0.33	NA	0.5	NA	NA	NA	0.13	NA
Chromium	100	18	NE	NE	7.5	6.1	13.3	7.4	5.2	6.2	NA	8.8	NA	NA	NA	5.8	NA
Lead	100	525	300	700	37.6	1.4	112^	1.9	39.1	2.8	24.7	30.0	89.7	24.0	11.8	2.9	76.2
Selenium	20	1.5	160	1300	<0.64	<0.60	<0.60	<0.59	<0.58	<0.69	NA	1.0	NA	NA	NA	<0.66	NA
Silver	100	3.9	160	1300	<0.43	<0.40	<0.40	<0.39	<0.39	<0.46	NA	<0.42	NA	NA	NA	<0.44	NA
Lead TCLP (mg/L)																	
Lead TCLP	EPA TCLP Hazardous Level = 5.0 mg/L				NA	NA	0.094	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury 7471A (mg/kg)																	
Mercury	4	1.6	.5	1.5	<0.020	<0.018	<0.022	<0.018	<0.020	<0.022	NA	<0.021	NA	NA	NA	0.14	NA
PCBs by SW 8082 (mg/kg)																	
<i>All non-detect</i>																	
VOCs 8260 (mg/kg)																	
1,2,4-Trimethylbenzene	NE	NE	8	25	<0.053	<0.052	<0.057	<0.052	<0.056	<0.058	NA	NA	NA	NA	NA	NA	
Benzene	10	0.034	6	10	<0.021	<0.021	<0.023	<0.021	<0.022	<0.023	NA	NA	NA	NA	NA	NA	
Naphthalene	NE	7.5	10	28	<0.21	<0.21	<0.23	<0.21	<0.22	0.27	NA	NA	NA	NA	NA	NA	
SVOCs / PAHs (mg/kg)																	
2-Methylnaphthalene	NE	NE	100	369	<0.35	<0.34	<0.38	<0.34	<0.71	<0.38	NA	NA	NA	NA	NA	<0.011	
Acenaphthene	NE	50	1200	5260	<0.35	<0.34	<0.38	<0.34	<0.71	<0.38	NA	NA	NA	NA	NA	<0.011	
Anthracene	NE	942	7880	45400	<0.35	<0.34	<0.38	<0.34	0.85	<0.38	NA	NA	NA	NA	NA	0.05	
Benzo(a)anthracene	NE	NE	NE	NE	<0.35	<0.34	<0.38	<0.34	4.4	0.49	NA	NA	NA	NA	NA	0.29	
Benzo(a)pyrene	NE	NE	2	3	<0.35	<0.34	<0.38	<0.34	5.9	0.44	NA	NA	NA	NA	NA	0.34	
Benzo(b)fluoranthene	NE	NE	NE	NE	0.47	<0.34	<0.38	<0.34	7.8	0.56	NA	NA	NA	NA	NA	0.52	
Benzo(g,h,i)perylene	NE	NE	NE	NE	<0.35	<0.34	<0.38	<0.34	4.1	<0.38	NA	NA	NA	NA	NA	0.27	
Benzo(k)fluoranthene	NE	NE	NE	NE	<0.35	<0.34	<0.38	<0.34	3.1	<0.38	NA	NA	NA	NA	NA	0.16	
Chrysene	NE	NE	NE	NE	<0.35	<0.34	<0.38	<0.34	5.0	0.50	NA	NA	NA	NA	NA	0.33	
Dibenz(a,h)anthracene	NE	NE	NE	NE	<0.35	<0.34	<0.38	<0.34	1.3	<0.38	NA	NA	NA	NA	NA	0.081	
Dibenzofuran	NE	NE	104	810	<0.35	<0.34	<0.38	<0.34	<0.71	<0.38	NA	NA	NA	NA	NA	<0.011	
Fluoranthene	NE	295	1080	6800	0.41	<0.34	<0.38	<0.34	3.9	0.77	NA	NA	NA	NA	NA	0.38	
Fluorene	NE	47	850	4120	<0.35	<0.34	<0.38	<0.34	<0.71	<0.38	NA	NA	NA	NA	NA	<0.011	
Indeno(1,2,3-cd)pyrene	NE	NE	NE	NE	<0.35	<0.34	<0.38	<0.34	3.7	<0.38	NA	NA	NA	NA	NA	0.23	
Naphthalene	NE	7.5	10	28	<0.35	<0.34	<0.38	<0.34	<0.71	<0.38	NA	NA	NA	NA	NA	<0.011	
Phenanthrene	NE	NE	NE	NE	<0.35	<0.34	<0.38	<0.34	0.72	<0.38	NA	NA	NA	NA	NA	0.1	
Pyrene	NE	272	890	5800	0.40	<0.34	<0.38	<0.34	4.1	0.75	NA	NA	NA	NA	NA	0.35	
Benzo(a)pyrene Equivalents	NE	NE	2	3	NA	NA	NA	NA	8.2	0.7	NA	NA	NA	NA	NA	0.7	

Notes:

<x: Indicates analyte concentration not detected above the laboratory reporting limit.

NA: Analysis not performed

NE: Standard not established for this analyte

mg/kg - milligrams per kilogram

Exceeds 20 X the TCLP hazardous limit (EPA)
Exceeds Tier 1 Soil Leachate Values
Exceeds Tier 1 Residential Soil Reference Value (MPCA)
Exceeds Tier 2 Industrial Soil Reference Value (MPCA)

Table 5
Groundwater Analytical Results
St. Louis Park FM, Site 2
Saint Louis Park, Minnesota

Parameter	MDH GWV	GP-18-3W	GP-25-8W	GP-26-23W
Metals (ug/L)				
Arsenic	NE	<10	<10	<10
Barium	2000	219	31.4	246
Cadmium	4	<1	<1	<1
Chromium	NE	<10	<10	<10
Lead	NE	<3	<3	<3
Mercury	NE	<0.2	<0.2	<0.2
Selenium	30	<15	<15	<15
Silver	NE	<10	<10	<10
Other (ug/L)				
Diesel Range Organics*	NE	11700	<110	220
Gasoline Range Organics*	NE	4230	<100	<100
Semi-VOCs (ug/L)				
Acenaphthene	400	<562	<10.9	24.5
Carbazole	NE	<562	<10.9	25.8
VOCs (ug/L)				
1,2,4-Trimethylbenzene	100	44.9	<1	<1
1,3,5-Trimethylbenzene	100	13.4	<1	<1
Benzene	2	153	<1	1.3
Ethylbenzene	50	75.6	<1	<1
m&p-Xylene	NE	138	<2	<2
Naphthalene	300	5980	<10.9	<10.6
o-Xylene	NE	73.2	<1	<1
Xylene (Total)	300	212	<3	<3

Notes:

All results reported in micrograms per liter (ug/L)

All depths are reported in feet below ground surface (bgs) and listed after the boring identification number

GWV - Minnesota Department of Health Ground Water Values

NE - No HRL established

* No HRL is established for DRO and GRO, the generally accepted guideline for the action level is 200 mg/kg

Exceeds MDH Groundwater Value

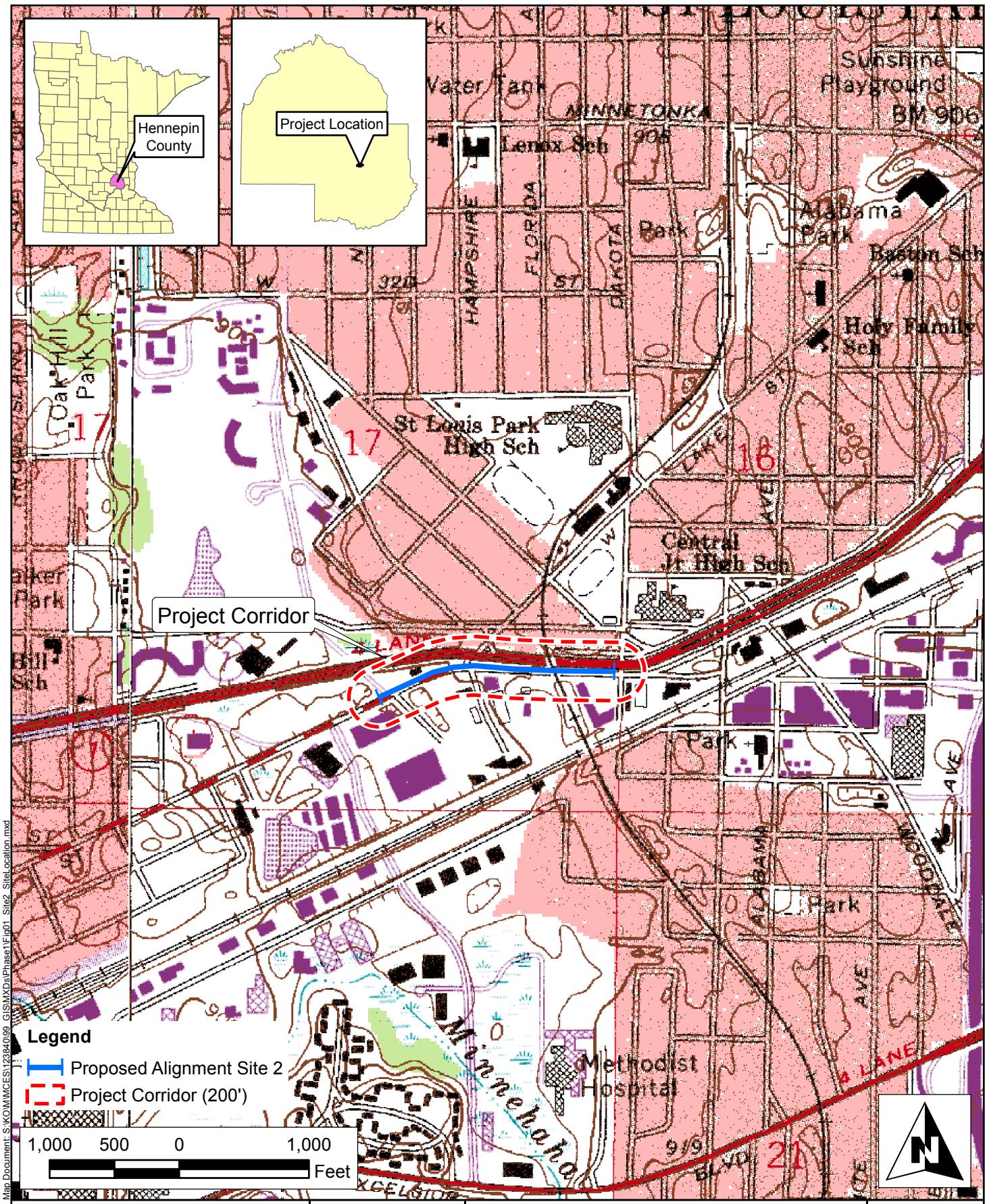


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Figure 2 – Phase I ESA Site Features

Figure 3 – Boring Locations



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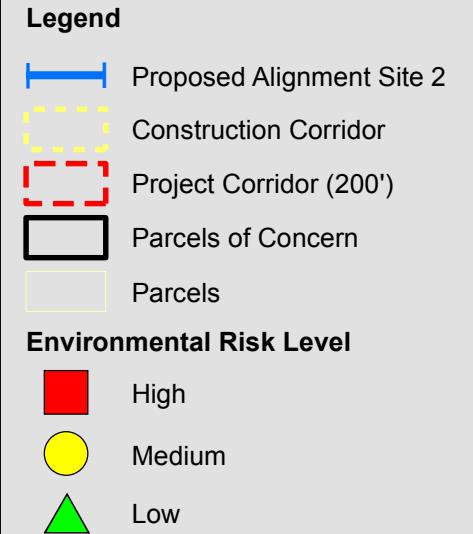
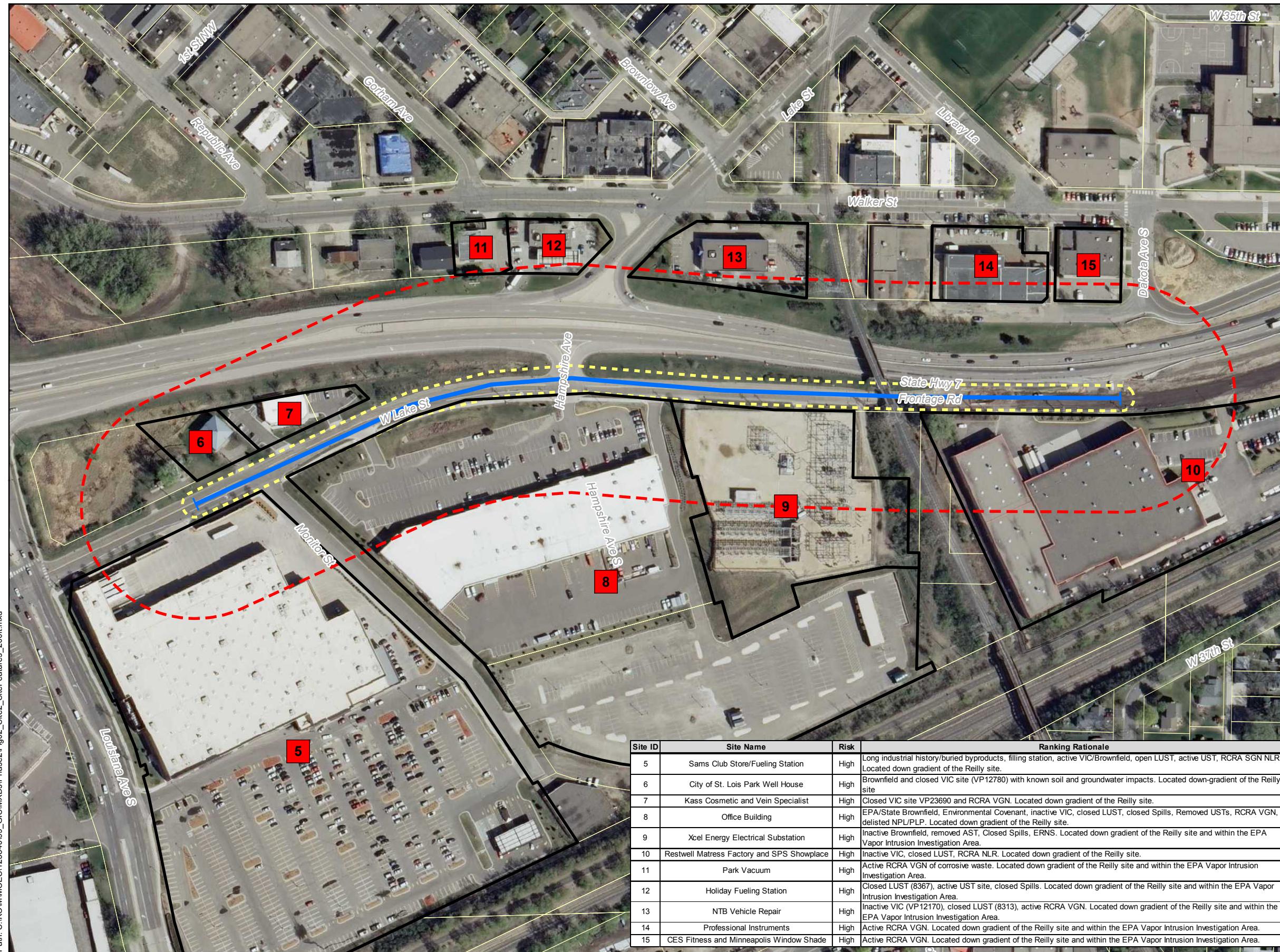
Project: MCES 123840
Print Date: 05/09/2013
Map by: srh
Projection: NAD 83, UTM zone 15
Source: USGS, Mn/DOT, SEH

St. Louis Park FM: Site 2

Environmental Site Assessment
St. Louis Park, Minnesota

Figure
1

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



0 100 200 400
Feet

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Project: MCES 123840
Print Date: 05/09/2013

Map by: bpt
Projection: NAD83 UTM 15N
Source: Mn/DOT, SEH Inc., St. Louis Park
Background: 2010 MnDNR

St. Louis Park FM: Site 2

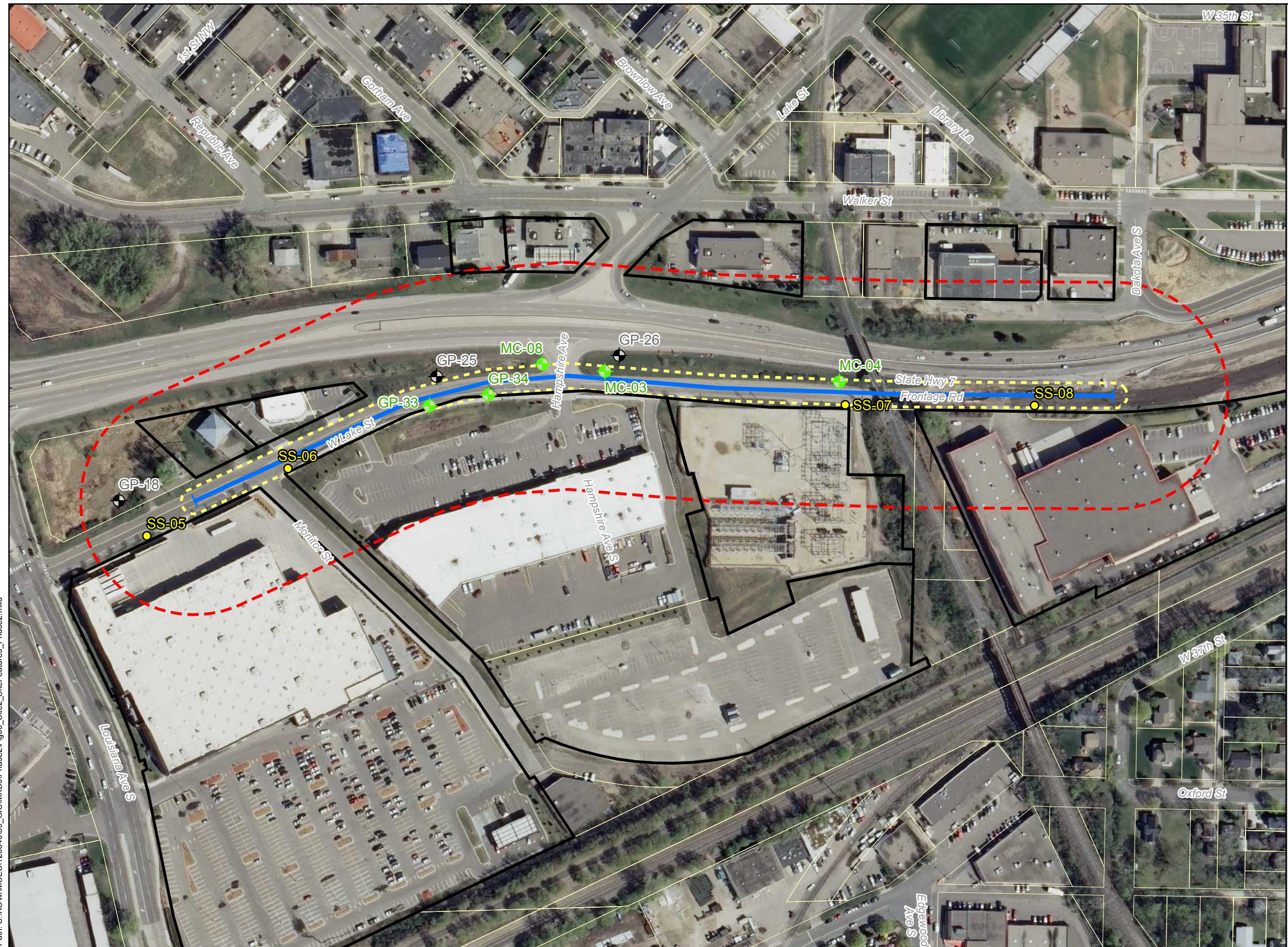
Phase 2 Environmental Site Assessment

St. Louis Park, Minnesota

Phase I ESA
Site Features



Figure
2



Legend

- 2012 Boring Locations
- 2011 Boring Locations
- Shallow Soil Samples
- Proposed Alignment Site 2
- Construction Corridor
- Project Corridor (200')
- Parcels of Concern
- Parcels



0 100 200 400 Feet

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

Boring Locations

Figure 3

Appendix A

Boring Logs

(See Descriptive Terminology sheet for explanation of abbreviations)

Braun Project BL-09-00745C GEOTECHNICAL EVALUATION MCES Force main along West Lake Street West Lake Street St. Louis Park, Minnesota				BORING: MC-3 LOCATION: See attached sketch.							
DRILLER: M. Rowland			METHOD: 3 1/4" HSA, Autohammer		DATE: 6/18/12		SCALE: 1" = 4'				
Elev. feet 904.4	Depth feet 0.0	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)				BPF	WL	MC %	P200 %	Tests or Notes
903.4	1.0	FILL	FILL: Silty Sand, fine- to medium-grained, dark brown, moist.								
			(Topsoil Fill)								
			FILL: Poorly Graded Sand with Silt, fine- to medium-grained, with Gravel, brown, moist.								
900.4	4.0	SP	POORLY GRADED SAND, fine- to coarse-grained, trace Gravel to with Gravel, possible Cobbles, light brown, moist, loose to medium dense.								
			(Glacial Outwash)								
890.4	14.0	CL	SANDY LEAN CLAY, with Poorly Graded Sand seams, trace Gravel and possible Cobbles, brown, wet, rather stiff.								
			(Glacial Till)								
887.4	17.0	SM	SILTY SAND, fine- to coarse-grained, with Gravel, brown, moist, dense.								
			(Glacial Outwash)								
885.4	19.0	SP	POORLY GRADED SAND, fine-grained, brown, moist, loose.								
			(Glacial Outwash)								
883.4	21.0		END OF BORING.								
			Water not observed with 19 1/2 feet of hollow-stem auger in the ground.								
			Water not observed to cave-in depth of 15 feet immediately after withdrawal of auger.								
			Boring immediately backfilled with bentonite grout.								

(See Descriptive Terminology sheet for explanation of abbreviations)

Braun Project BL-09-00745C GEOTECHNICAL EVALUATION MCES Force main along West Lake Street West Lake Street St. Louis Park, Minnesota				BORING: MC-4 LOCATION: Offset 5 feet west of stake. See attached sketch.									
DRILLER: M. Rowland			METHOD: 3 1/4" HSA, Autohammer		DATE: 6/18/12		SCALE: 1" = 4'						
Elev. feet 913.2	Depth feet 0.0	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)				BPF	WL	MC %	P200 %	Tests or Notes		
912.2	1.0	FILL	FILL: Silty Sand, fine-grained, trace roots, dark brown, moist. (Topsoil Fill)										
911.2	2.0	FILL	FILL: Silty Sand, fine-grained, brown, moist. FILL: Poorly Graded Sand, fine- to coarse-grained, trace Gravel, brown, moist.				7		3	4	See Grain Size Curve.		
906.2	7.0	FILL	FILL: Poorly Graded Sand with Silt, fine- to coarse-grained, with Lean Clay inclusions, with Gravel, light brown and dark brown, moist.				12		5	11	See Grain Size Curve.		
904.2	9.0	SP	POORLY GRADED SAND, fine- to coarse-grained, trace Gravel to with Gravel, light brown, moist, medium dense. (Glacial Outwash)				11		3	3	See Grain Size Curve.		
892.2	21.0		END OF BORING. Water not observed with 19 1/2 feet of hollow-stem auger in the ground. Water not observed to cave-in depth of 16 feet immediately after withdrawal of auger. Boring immediately backfilled with bentonite grout.				15	15	21	23			

(See Descriptive Terminology sheet for explanation of abbreviations)

Braun Project BL-09-00745C GEOTECHNICAL EVALUATION MCES Force main along West Lake Street West Lake Street St. Louis Park, Minnesota				BORING: MC-8 LOCATION: Offset 11 feet southwest of stake. See attached sketch.					
DRILLER: M. Rowland			METHOD: 3 1/4" HSA, Autohammer	DATE: 6/18/12		SCALE: 1" = 4'			
Elev. feet 901.2	Depth feet 0.0	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	MC %	P200 %	Tests or Notes	
900.9	0.3	FILL	FILL: Silty Sand, black, moist. (Topsoil)		17	9		OC=2%	
		FILL	FILL: Silty Sand, fine- to coarse-grained, trace Gravel to with Gravel, non to slightly organic, dark brown and black, moist.		7*	8	17	*Possible chemical odor. See Grain Size Curve.	
894.2	7.0	FILL	Possible bituminous fragments at 5 feet.		16*	14			
887.2	14.0	FILL	FILL: Clayey Sand, fine-grained, trace Gravel, with possible bituminous fragments, dark brown, wet.		14**	5	19	**Gravel encountered, little sample recovery.	
884.2	17.0	PT	PEAT, fiberous, black, wet. (Swamp Deposit)	4		158			
882.2	19.0	SC	CLAYEY SAND, fine- to coarse-grained, non- to slightly organic, trace Gravel, black, wet. (Swamp Deposit)	4		15		OC=2%	
875.2	26.0	SP-SM	POORLY GRADED SAND with SILT, fine- to coarse-grained, with Gravel, gray, waterbearing, medium dense to very loose. (Glacial Outwash)	13		8	6	See Grain Size Curve.	
			END OF BORING.		3				
			Water observed at a depth of 15 feet with 15 feet of hollow-stem auger in the ground.					** Water observed at 17 feet immediately after withdrawal of auger.	
			Water observed at a depth of 19 feet with 24 1/2 feet of hollow-stem auger in the ground. **					Boring immediately backfilled with bentonite grout.	



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BORING NUMBER GP-18

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CLIENT City of Saint Louis Park

PROJECT NAME TH 7 and Louisiana Avenue Interchange

PROJECT NUMBER 106311

PROJECT LOCATION

DATE/TIME STARTED 8/10/11 1130 COMPLETED 8/10/11 1230

GROUND ELEVATION 888 ft

HOLE SIZE 2

DRILLING CONTRACTOR Thein Well- A. Wieber

GROUND WATER LEVELS:

DRILLING METHOD Geoprobe SAMPLING METHOD Macro-Core

AT TIME OF DRILLING 3.0 ft / Elev 885.0 ft

LOGGED BY J. Kinny

CHECKED BY J. Kinny

AT END OF DRILLING ---

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	10.6 eV PID (ppm)
0						
1	OL	60	SW	0.2	Loose, moist, brown, fine to medium grained, silty SAND (Fill) Loose, moist, brown, well graded, fine to medium grained, SAND (Fill)	887.8 3.6
5	PT	92	PT	4.0	Loose, moist, dark brown, fibric PEAT (Swamp deposit)	884.0 3.4
10	PT	79	PT	8.0	Loose, moist, dark gray, well graded, fine to coarse grained, SAND (Outwash)	880.0 4.1
10	PT	79	PT	10.0	Loose, moist, black, henic PEAT (Swamp deposit)	878.0 2.6
15	SP	79		11.5	Medium density, moist, light gray SILT (Swamp deposit)	876.5 2.3
15	SP	81		18.0	Slight naphthalene-like odor at 17' bgs	870.0 3.7
20	SW			20.0	Loose, wet, dark gray, well graded, fine to coarse grained SAND (Outwash) naphthalene-like odor	868.0 3.2
					End of Boring <i>Naphthalene-like odor 17 to 20 feet bgs.</i>	3.4 2.7 7.3



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BORING NUMBER GP-25

PAGE 1 OF 1

CLIENT City of Saint Louis Park

PROJECT NAME TH 7 and Louisiana Avenue Interchange

PROJECT NUMBER 106311

PROJECT LOCATION

DATE/TIME STARTED 8/11/11 1030

COMPLETED 8/11/11 1120

GROUND ELEVATION 897 ft

HOLE SIZE 2

DRILLING CONTRACTOR Thein Well- A. Wieber

GROUND WATER LEVELS:

DRILLING METHOD Geoprobe

SAMPLING METHOD Macro-Core

AT TIME OF DRILLING 9.5 ft / Elev 887.5 ft

LOGGED BY J. Kinny

CHECKED BY J. Kinny

AT END OF DRILLING 7.6 ft / Elev 889.4 ft

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	10.6 eV PID (ppm)
0						
1	79		OL	0.5	Loose, moist, dark brown, fine to medium grained, silty SAND, trace roots (Topsoil) Loose, moist, dark brown, fine to medium grained, silty SAND with gravel (Fill)	896.5
5			SM			5.4
2	79		SM	6.0	Loose, moist, dark brown, fine to medium grained, silty SAND with gravel and cobbles (Fill)	891.0
10	71		SM	9.5	▼	8.4
3			SW		Loose, wet, brown, well graded, fine to coarse grained SAND (Fill)	5.9
15	96		SM	14.0		9.3
			PT	14.5	Loose, moist, dark brown, fine to medium grained, silty SAND (Alluvium) Loose, moist, dark brown, fibric PEAT (Swamp deposit)	10.1
4			SM	16.0		9.2
20			SC		Loose, wet, black, clayey SAND (Alluvium) Organic odor	6.7
5	96		CL	22.5		9.0
6	96		CL	24.0	Soft, black, lean clay (Swamp Deposit) Sandstone rock at 24 feet bgs	6.2
					874.5	4.0
						4.8
					873.0	

End of Boring
No indications of impacts



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BORING NUMBER GP-26

PAGE 1 OF 1

CLIENT City of Saint Louis Park

PROJECT NAME TH 7 and Louisiana Avenue Interchange

PROJECT NUMBER 106311

PROJECT LOCATION

DATE/TIME STARTED 8/11/11 1125 COMPLETED 8/11/11 1230 GROUND ELEVATION 905 ft HOLE SIZE 2

DRILLING CONTRACTOR Thein Well- A. Wieber

GROUND WATER LEVELS:

AT TIME OF DRILLING 24.0 ft / Elev 881.0 ft

AT END OF DRILLING 23.0 ft / Elev 882.0 ft

LOGGED BY J. Kinny

CHECKED BY J. Kinny

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	10.6 eV PID (ppm)
0						
1	1	98	OL	1.0	Loose, moist, dark brown, fine to medium grained, silty SAND (Topsoil)	904.0
2	2	96	SC	4.0	Loose, moist, dark brown, clayey SAND, trace gravel (Fill)	15.3
3	3	92				901.0
4	4	75				15.1
5						10.6
10						11.8
15						10.8
20						8.0
25						11.1
30						9.8
						10.5
						8.86.5
						7.9
						885.0
						9.8
						7.5
						881.0
						13.1
						12.2
						12.6
						875.0
					End of Boring <i>Organic odor and slight naphthalene-like odor from 24 to 27.5 feet bgs.</i>	



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BORING NUMBER GP-33

PAGE 1 OF 1

CLIENT MCES

PROJECT NAME Louisiana Ave Forcemain Relocation East

PROJECT NUMBER MCES0 120761

PROJECT LOCATION Lake Street, Saint Louis Park, MN

DATE/TIME STARTED 9/11/12 1015 COMPLETED 9/11/12 1038

GROUND ELEVATION

HOLE SIZE 2"

DRILLING CONTRACTOR Thein Well - B. Hilbrands

GROUND WATER LEVELS:

DRILLING METHOD Geoprobe SAMPLING METHOD Continuous

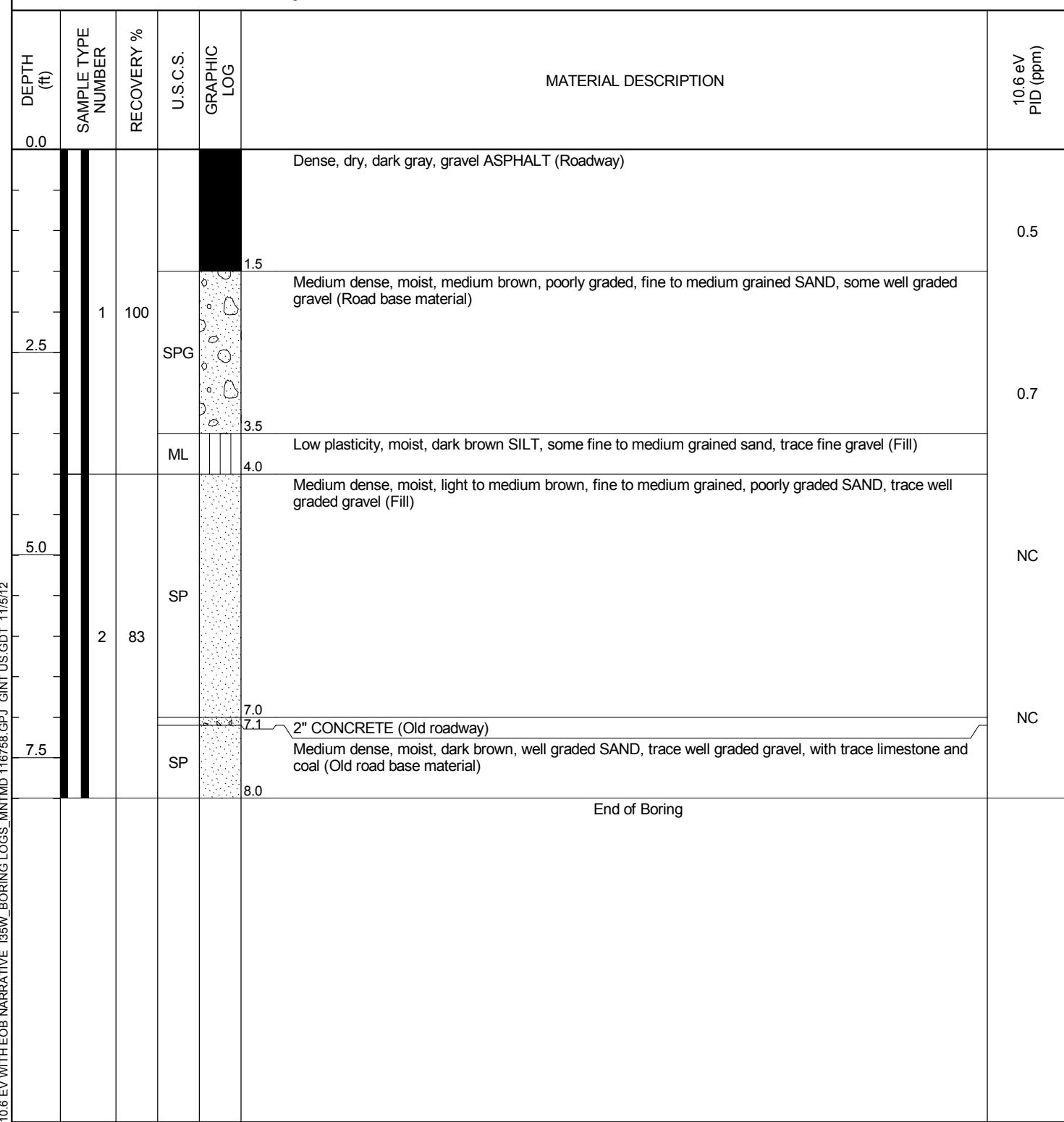
AT TIME OF DRILLING Not encountered

LOGGED BY E. Borgschatz CHECKED BY A. Sunderman

AT END OF DRILLING ---

NOTES Coal observed in fill at 7.5 feet bgs.

AFTER DRILLING ---





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BORING NUMBER GP-34

PAGE 1 OF 1

CLIENT MCES

PROJECT NAME Louisiana Ave Forcemain Relocation East

PROJECT NUMBER MCESO 120761

PROJECT LOCATION Lake Street, Saint Louis Park, MN

DATE/TIME STARTED 9/11/12 1040 COMPLETED 9/11/12 1055

GROUND ELEVATION

HOLE SIZE 2"

DRILLING CONTRACTOR Thein Well - B. Hilbrands

GROUND WATER LEVELS:

DRILLING METHOD Geoprobe SAMPLING METHOD Continuous

AT TIME OF DRILLING Not encountered

LOGGED BY E. Borgschatz CHECKED BY A. Sunderman

AT END OF DRILLING ---

NOTES Coal observed at 3.7 feet bgs.

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	10.6 eV PID (ppm)
0.0					Dense, dry, dark gray, gravel ASPHALT (Roadway)	
				1.0	Medium dense, moist, light brown, fine to medium grained, poorly graded SAND, some well graded sand (Road base material)	0.9
2.5	1	100	SP		Dark brown from 3-3.7' bgs	
				4.0	Coal observed from 3.7-4' bgs	
					End of Boring	

Appendix B

Laboratory Reports (CD-ROM)

July 19, 2012

Matt Beckman
Short Elliott Hendrickson
3535 Vadnais Center Drive
Saint Paul, MN 55110

RE: Project: MCES 120761 REV
Pace Project No.: 10196172

Dear Matt Beckman:

Enclosed are the analytical results for sample(s) received by the laboratory on June 20, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This report has been revised to add TCLP-Lead and Arsenic by 6020 to sample 001.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Carol Davy

carol.davy@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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Page 1 of 87

CERTIFICATIONS

Project: MCES 120761 REV

Pace Project No.: 10196172

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Iowa Certification #: 368
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New Mexico Certification #: Pace
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
Ohio VAP Certification #: CL101
Oklahoma Certification #: D9921
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Washington Certification #: C754
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: MCES 120761 REV

Pace Project No.: 10196172

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10196172001	MC-04-2.5	Solid	06/18/12 09:20	06/20/12 13:28
10196172002	MC-04-08	Solid	06/18/12 09:35	06/20/12 13:28
10196172003	MC-03-02	Solid	06/18/12 10:30	06/20/12 13:28
10196172004	MC-03-07	Solid	06/18/12 10:45	06/20/12 13:28
10196172005	MC-08-04	Solid	06/18/12 11:40	06/20/12 13:28
10196172006	MC-08-7.5	Solid	06/18/12 11:55	06/20/12 13:28
10196172007	MC-01-04	Solid	06/18/12 13:45	06/20/12 13:28
10196172008	MC-01-10	Solid	06/18/12 14:10	06/20/12 13:28
10196172009	TRIP BLANK	Solid	06/18/12 00:00	06/20/12 13:28

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SAMPLE ANALYTE COUNT

Project: MCES 120761 REV
Pace Project No.: 10196172

Lab ID	Sample ID	Method	Analysts	Analytics Reported
10196172001	MC-04-2.5	EPA 8082	KL1	11
		WI MOD DRO	JRH	2
		WI MOD GRO	KT1	2
		EPA 6010	IP	7
		EPA 6010	IP	1
		EPA 6020	RJS	1
		EPA 7471	TEM	1
		ASTM D2974	JDL	1
		EPA 8270	JLR	72
		EPA 8260	CNC	71
10196172002	MC-04-08	EPA 8082	KL1	11
		WI MOD DRO	JRH	2
		WI MOD GRO	KT1	2
		EPA 6010	IP	7
		EPA 7471	TEM	1
		ASTM D2974	JDL	1
		EPA 8270	JLR	72
		EPA 8260	CNC	71
		EPA 8082	KL1	11
		WI MOD DRO	JRH	2
10196172003	MC-03-02	WI MOD GRO	KT1	2
		EPA 6010	IP	7
		EPA 7471	TEM	1
		ASTM D2974	JDL	1
		EPA 8270	JLR	72
		EPA 8260	CNC	71
		EPA 8082	KL1	11
		WI MOD DRO	JRH	2
		WI MOD GRO	KT1	2
		EPA 6010	IP	7
10196172004	MC-03-07	EPA 7471	TEM	1
		ASTM D2974	JDL	1
		EPA 8270	JLR	72
		EPA 8260	CNC	71
		EPA 8082	KL1	11
		WI MOD DRO	JRH	2
		WI MOD GRO	KT1	2
		EPA 6010	IP	7
		EPA 7471	TEM	1
		ASTM D2974	JDL	1
10196172005	MC-08-04	EPA 8270	JLR	72
		EPA 8260	CNC	71
		EPA 8082	KL1	11
		WI MOD DRO	JRH	2
		WI MOD GRO	KT1	2

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SAMPLE ANALYTE COUNT

Project: MCES 120761 REV
Pace Project No.: 10196172

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10196172006	MC-08-7.5	EPA 6010	IP	7
		EPA 7471	TEM	1
		ASTM D2974	JDL	1
		EPA 8270	JLR	72
		EPA 8260	CNC	71
		EPA 8082	KL1	11
		WI MOD DRO	JRH	2
		WI MOD GRO	KT1	2
		EPA 6010	IP	7
		EPA 7471	TEM	1
10196172007	MC-01-04	ASTM D2974	JDL	1
		EPA 8270	JLR	72
		EPA 8260	CNC	71
		EPA 8082	KL1	11
		WI MOD DRO	JRH	2
		WI MOD GRO	KT1	2
		EPA 6010	IP	7
		EPA 7471	TEM	1
		ASTM D2974	JDL	1
		EPA 8270	JLR	72
10196172008	MC-01-10	EPA 8260	CNC	71
		EPA 8082	KL1	11
		WI MOD DRO	JRH	2
		WI MOD GRO	KT1	2
		EPA 6010	IP	7
		EPA 7471	TEM	1
		ASTM D2974	JDL	1
		EPA 8270	JLR	72
		EPA 8260	CNC	71
		EPA 8260	CNC	71
10196172009	TRIP BLANK			

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PROJECT NARRATIVE

Project: MCES 120761 REV

Pace Project No.: 10196172

Method: **EPA 8082**

Description: 8082 GCS PCB

Client: SEH_MN

Date: July 19, 2012

General Information:

8 samples were analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3550 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

QC Batch: OEXT/18919

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

- MC-03-02 (Lab ID: 10196172003)
- Decachlorobiphenyl (S)

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: OEXT/18919

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- MC-01-10 (Lab ID: 10196172008)
- Tetrachloro-m-xylene (S)

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: OEXT/18919

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MC-01-04 (Lab ID: 10196172007)
- Tetrachloro-m-xylene (S)

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PROJECT NARRATIVE

Project: MCES 120761 REV
Pace Project No.: 10196172

Method: **EPA 8082**
Description: 8082 GCS PCB
Client: SEH_MN
Date: July 19, 2012

Analyte Comments:

QC Batch: OEXT/18919

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MC-01-10 (Lab ID: 10196172008)
 - Tetrachloro-m-xylene (S)
- MC-08-7.5 (Lab ID: 10196172006)
 - Tetrachloro-m-xylene (S)

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PROJECT NARRATIVE

Project: MCES 120761 REV
Pace Project No.: 10196172

Method: WI MOD DRO
Description: WIDRO GCS
Client: SEH_MN
Date: July 19, 2012

General Information:

8 samples were analyzed for WI MOD DRO. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with WI MOD DRO with any exceptions noted below.

QC Batch: OEXT/18920

- P3: Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.
• MC-08-04 (Lab ID: 10196172005)

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: OEXT/18920

- S4: Surrogate recovery not evaluated against control limits due to sample dilution.
• MC-08-7.5 (Lab ID: 10196172006)
• n-Triacantane (S)

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: OEXT/18920

- T6: High boiling point hydrocarbons are present in the sample.
• MC-01-04 (Lab ID: 10196172007)
• Diesel Range Organics

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PROJECT NARRATIVE

Project: MCES 120761 REV

Pace Project No.: 10196172

Method: WI MOD DRO

Description: WIDRO GCS

Client: SEH_MN

Date: July 19, 2012

Analyte Comments:

QC Batch: OEXT/18920

T6: High boiling point hydrocarbons are present in the sample.

- MC-01-10 (Lab ID: 10196172008)
 - Diesel Range Organics
- MC-03-02 (Lab ID: 10196172003)
 - Diesel Range Organics
- MC-04-2.5 (Lab ID: 10196172001)
 - Diesel Range Organics
- MC-08-04 (Lab ID: 10196172005)
 - Diesel Range Organics
- MC-08-7.5 (Lab ID: 10196172006)
 - Diesel Range Organics

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PROJECT NARRATIVE

Project: MCES 120761 REV

Pace Project No.: 10196172

Method: WI MOD GRO

Description: WIGRO GCV

Client: SEH_MN

Date: July 19, 2012

General Information:

8 samples were analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TPH GRO/PVOC WI ext. with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: GCV/9427

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MC-01-10 (Lab ID: 10196172008)
- a,a,a-Trifluorotoluene (S)

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PROJECT NARRATIVE

Project: MCES 120761 REV

Pace Project No.: 10196172

Method: **EPA 6010**

Description: 6010 MET ICP

Client: SEH_MN

Date: July 19, 2012

General Information:

8 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MPRP/33133

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10196172002

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- MSD (Lab ID: 1222999)
 - Arsenic
 - Barium
 - Cadmium
 - Chromium
 - Lead
 - Selenium
 - Silver

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1222998)
 - Barium
 - Cadmium
 - Chromium
 - Lead
 - Selenium

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PROJECT NARRATIVE

Project: MCES 120761 REV
Pace Project No.: 10196172

Method: EPA 6010
Description: 6010 MET ICP
Client: SEH_MN
Date: July 19, 2012

Additional Comments:

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PROJECT NARRATIVE

Project: MCES 120761 REV

Pace Project No.: 10196172

Method: **EPA 6010**

Description: 6010 MET ICP, TCLP

Client: SEH_MN

Date: July 19, 2012

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: MCES 120761 REV

Pace Project No.: 10196172

Method: **EPA 6020**

Description: 6020 MET ICPMS

Client: SEH_MN

Date: July 19, 2012

General Information:

1 sample was analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: MCES 120761 REV
Pace Project No.: 10196172

Method: EPA 7471
Description: 7471 Mercury
Client: SEH_MN
Date: July 19, 2012

General Information:

8 samples were analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MERP/7016

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10196124003,10196157001

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- MSD (Lab ID: 1223200)
 - Mercury

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1223199)
 - Mercury
- MS (Lab ID: 1223201)
 - Mercury

Additional Comments:

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PROJECT NARRATIVE

Project: MCES 120761 REV

Pace Project No.: 10196172

Method: EPA 8270

Description: 8270 MSSV

Client: SEH_MN

Date: July 19, 2012

General Information:

8 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below.

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.

- MC-01-04 (Lab ID: 10196172007)
- MC-01-10 (Lab ID: 10196172008)
- MC-03-02 (Lab ID: 10196172003)
- MC-03-07 (Lab ID: 10196172004)
- MC-04-08 (Lab ID: 10196172002)
- MC-04-2.5 (Lab ID: 10196172001)
- MC-08-04 (Lab ID: 10196172005)
- MC-08-7.5 (Lab ID: 10196172006)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3550 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

QC Batch: OEXT/18933

SS: This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

- BLANK (Lab ID: 1224304)
 - Benzidine
- LCS (Lab ID: 1224305)
 - Benzidine
- MC-01-04 (Lab ID: 10196172007)
 - Benzidine
- MC-01-10 (Lab ID: 10196172008)
 - Benzidine
- MC-03-02 (Lab ID: 10196172003)
 - Benzidine
- MC-03-07 (Lab ID: 10196172004)
 - Benzidine
- MC-04-08 (Lab ID: 10196172002)
 - Benzidine
- MC-04-2.5 (Lab ID: 10196172001)
 - Benzidine
- MC-08-04 (Lab ID: 10196172005)
 - Benzidine
- MC-08-7.5 (Lab ID: 10196172006)
 - Benzidine
- MS (Lab ID: 1224306)

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PROJECT NARRATIVE

Project: MCES 120761 REV

Pace Project No.: 10196172

Method: **EPA 8270**

Description: 8270 MSSV

Client: SEH_MN

Date: July 19, 2012

QC Batch: OEXT/18933

SS: This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

- Benzidine
- MSD (Lab ID: 1224307)
- Benzidine

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

QC Batch: OEXT/18933

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

- LCS (Lab ID: 1224305)
 - 2-Nitroaniline
 - 4-Nitrophenol
 - Di-n-octylphthalate
- MS (Lab ID: 1224306)
 - 2-Nitroaniline
 - 4-Nitrophenol
 - Di-n-octylphthalate
- MSD (Lab ID: 1224307)
 - 2-Nitroaniline
 - 4-Nitrophenol
 - Di-n-octylphthalate

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

- BLANK (Lab ID: 1224304)
 - Benzidine
- LCS (Lab ID: 1224305)
 - Benzidine
- MC-01-04 (Lab ID: 10196172007)
 - Benzidine
- MC-01-10 (Lab ID: 10196172008)
 - Benzidine
- MC-03-02 (Lab ID: 10196172003)
 - Benzidine
- MC-03-07 (Lab ID: 10196172004)
 - Benzidine
- MC-04-08 (Lab ID: 10196172002)
 - Benzidine
- MC-04-2.5 (Lab ID: 10196172001)
 - Benzidine
- MC-08-04 (Lab ID: 10196172005)
 - Benzidine
- MC-08-7.5 (Lab ID: 10196172006)
 - Benzidine
- MS (Lab ID: 1224306)

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PROJECT NARRATIVE

Project: MCES 120761 REV

Pace Project No.: 10196172

Method: EPA 8270

Description: 8270 MSSV

Client: SEH_MN

Date: July 19, 2012

QC Batch: OEXT/18933

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

- Benzidine
- MSD (Lab ID: 1224307)
- Benzidine

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: OEXT/18933

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- MC-01-04 (Lab ID: 10196172007)
 - 2,4,6-Tribromophenol (S)
 - 2-Fluorobiphenyl (S)
 - 2-Fluorophenol (S)
 - Nitrobenzene-d5 (S)
 - Phenol-d6 (S)
 - Terphenyl-d14 (S)

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: OEXT/18933

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1224305)
 - Benzidine

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: OEXT/18933

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10196172001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1224306)
 - Benzidine
- MSD (Lab ID: 1224307)
 - Benzidine

Additional Comments:

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PROJECT NARRATIVE

Project: MCES 120761 REV
Pace Project No.: 10196172

Method: EPA 8270
Description: 8270 MSSV
Client: SEH_MN
Date: July 19, 2012

Analyte Comments:

QC Batch: OEXT/18933

D4: Sample was diluted due to the presence of high levels of target analytes.

- MC-01-04 (Lab ID: 10196172007)
 - Nitrobenzene-d5 (S)
- MC-01-10 (Lab ID: 10196172008)
 - Nitrobenzene-d5 (S)
- MC-08-04 (Lab ID: 10196172005)
 - Nitrobenzene-d5 (S)

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PROJECT NARRATIVE

Project: MCES 120761 REV

Pace Project No.: 10196172

Method: **EPA 8260**

Description: 8260 MSV 5030 Med Level

Client: SEH_MN

Date: July 19, 2012

General Information:

9 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: MSV/20539

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- TRIP BLANK (Lab ID: 10196172009)
- 1,2-Dichloroethane-d4 (S)
- 4-Bromofluorobenzene (S)
- Dibromofluoromethane (S)
- Toluene-d8 (S)

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: MSV/20539

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCSD (Lab ID: 1222973)
- 1,2-Dibromo-3-chloropropane
- Bromoform

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: MCES 120761 REV
Pace Project No.: 10196172

Method: **EPA 8260**
Description: 8260 MSV 5030 Med Level
Client: SEH_MN
Date: July 19, 2012

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-04-2.5 Lab ID: 10196172001 Collected: 06/18/12 09:20 Received: 06/20/12 13:28 Matrix: Solid
Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3550								
PCB-1016 (Aroclor 1016)	ND mg/kg		0.038	0.014	1	06/21/12 07:28	06/25/12 19:10	12674-11-2	
PCB-1221 (Aroclor 1221)	ND mg/kg		0.038	0.015	1	06/21/12 07:28	06/25/12 19:10	11104-28-2	
PCB-1232 (Aroclor 1232)	ND mg/kg		0.038	0.016	1	06/21/12 07:28	06/25/12 19:10	11141-16-5	
PCB-1242 (Aroclor 1242)	ND mg/kg		0.038	0.0092	1	06/21/12 07:28	06/25/12 19:10	53469-21-9	
PCB-1248 (Aroclor 1248)	ND mg/kg		0.038	0.0080	1	06/21/12 07:28	06/25/12 19:10	12672-29-6	
PCB-1254 (Aroclor 1254)	ND mg/kg		0.038	0.010	1	06/21/12 07:28	06/25/12 19:10	11097-69-1	
PCB-1260 (Aroclor 1260)	ND mg/kg		0.038	0.014	1	06/21/12 07:28	06/25/12 19:10	11096-82-5	
PCB-1262 (Aroclor 1262)	ND mg/kg		0.038	0.0046	1	06/21/12 07:28	06/25/12 19:10	37324-23-5	
PCB-1268 (Aroclor 1268)	ND mg/kg		0.038	0.0069	1	06/21/12 07:28	06/25/12 19:10	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	87 %	30-150			1	06/21/12 07:28	06/25/12 19:10	877-09-8	
Decachlorobiphenyl (S)	108 %	30-150			1	06/21/12 07:28	06/25/12 19:10	2051-24-3	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	22.3 mg/kg		9.6	1.1	1	06/21/12 09:36	06/22/12 17:59		T6
Surrogates									
n-Triacontane (S)	78 %	50-150			1	06/21/12 09:36	06/22/12 17:59		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	ND mg/kg		5.7	0.56	1	06/22/12 14:01	06/24/12 05:56		
Surrogates									
a,a,a-Trifluorotoluene (S)	101 %	80-125			1	06/22/12 14:01	06/24/12 05:56	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	12.3 mg/kg		0.40	0.096	1	06/21/12 13:43	06/22/12 11:46	7440-38-2	
Barium	86.2 mg/kg		0.40	0.016	1	06/21/12 13:43	06/22/12 11:46	7440-39-3	
Cadmium	0.93 mg/kg		0.040	0.016	1	06/21/12 13:43	06/22/12 11:46	7440-43-9	
Chromium	13.3 mg/kg		0.40	0.20	1	06/21/12 13:43	06/22/12 11:46	7440-47-3	
Lead	112 mg/kg		0.24	0.040	1	06/21/12 13:43	06/22/12 11:46	7439-92-1	
Selenium	ND mg/kg		0.60	0.14	1	06/21/12 13:43	06/22/12 11:46	7782-49-2	
Silver	ND mg/kg		0.40	0.048	1	06/21/12 13:43	06/22/12 11:46	7440-22-4	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Leachate Method/Date: EPA 1311; 07/12/12 13:05								
Lead	0.094 mg/L		0.015	0.0042	5	07/12/12 15:18	07/13/12 13:37	7439-92-1	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050								
Arsenic	5.1 mg/kg		1.3	0.48	50	07/12/12 10:15	07/17/12 08:06	7440-38-2	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	ND mg/kg		0.022	0.0067	1	06/21/12 13:29	06/22/12 17:23	7439-97-6	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	13.0 %		0.10	0.10	1			06/21/12 00:00	

Date: 07/19/2012 11:40 AM

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-04-2.5 Lab ID: 10196172001 Collected: 06/18/12 09:20 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Acenaphthene	ND mg/kg	0.38	0.045	1	06/22/12 09:02	06/26/12 09:47	83-32-9		
Acenaphthylene	ND mg/kg	0.38	0.044	1	06/22/12 09:02	06/26/12 09:47	208-96-8		
Anthracene	ND mg/kg	0.38	0.049	1	06/22/12 09:02	06/26/12 09:47	120-12-7		
Benzidine	ND mg/kg	1.8	0.92	1	06/22/12 09:02	06/26/12 09:47	92-87-5		
Benzo(a)anthracene	ND mg/kg	0.38	0.054	1	06/22/12 09:02	06/26/12 09:47	56-55-3		CL,L2, M0,SS
Benzo(a)pyrene	ND mg/kg	0.38	0.054	1	06/22/12 09:02	06/26/12 09:47	50-32-8		
Benzo(b)fluoranthene	ND mg/kg	0.38	0.054	1	06/22/12 09:02	06/26/12 09:47	205-99-2		
Benzo(g,h,i)perylene	ND mg/kg	0.38	0.058	1	06/22/12 09:02	06/26/12 09:47	191-24-2		
Benzo(k)fluoranthene	ND mg/kg	0.38	0.053	1	06/22/12 09:02	06/26/12 09:47	207-08-9		
Benzoic acid	ND mg/kg	2.0	0.53	1	06/22/12 09:02	06/26/12 09:47	65-85-0		
Benzyl alcohol	ND mg/kg	0.76	0.056	1	06/22/12 09:02	06/26/12 09:47	100-51-6		
4-Bromophenylphenyl ether	ND mg/kg	0.38	0.058	1	06/22/12 09:02	06/26/12 09:47	101-55-3		
Butylbenzylphthalate	ND mg/kg	0.38	0.052	1	06/22/12 09:02	06/26/12 09:47	85-68-7		
4-Chloro-3-methylphenol	ND mg/kg	0.38	0.044	1	06/22/12 09:02	06/26/12 09:47	59-50-7		
4-Chloroaniline	ND mg/kg	0.38	0.19	1	06/22/12 09:02	06/26/12 09:47	106-47-8		
bis(2-Chloroethoxy)methane	ND mg/kg	0.38	0.064	1	06/22/12 09:02	06/26/12 09:47	111-91-1		
bis(2-Chloroethyl) ether	ND mg/kg	0.38	0.078	1	06/22/12 09:02	06/26/12 09:47	111-44-4		
bis(2-Chloroisopropyl) ether	ND mg/kg	0.38	0.091	1	06/22/12 09:02	06/26/12 09:47	108-60-1		
2-Chloronaphthalene	ND mg/kg	0.38	0.046	1	06/22/12 09:02	06/26/12 09:47	91-58-7		
2-Chlorophenol	ND mg/kg	0.38	0.083	1	06/22/12 09:02	06/26/12 09:47	95-57-8		
4-Chlorophenylphenyl ether	ND mg/kg	0.38	0.051	1	06/22/12 09:02	06/26/12 09:47	7005-72-3		
Chrysene	ND mg/kg	0.38	0.054	1	06/22/12 09:02	06/26/12 09:47	218-01-9		
Dibenz(a,h)anthracene	ND mg/kg	0.38	0.059	1	06/22/12 09:02	06/26/12 09:47	53-70-3		
Dibenzofuran	ND mg/kg	0.38	0.046	1	06/22/12 09:02	06/26/12 09:47	132-64-9		
1,2-Dichlorobenzene	ND mg/kg	0.38	0.081	1	06/22/12 09:02	06/26/12 09:47	95-50-1		
1,3-Dichlorobenzene	ND mg/kg	0.38	0.087	1	06/22/12 09:02	06/26/12 09:47	541-73-1		
1,4-Dichlorobenzene	ND mg/kg	0.38	0.081	1	06/22/12 09:02	06/26/12 09:47	106-46-7		
3,3'-Dichlorobenzidine	ND mg/kg	0.77	0.39	1	06/22/12 09:02	06/26/12 09:47	91-94-1		
2,4-Dichlorophenol	ND mg/kg	0.38	0.057	1	06/22/12 09:02	06/26/12 09:47	120-83-2		
Diethylphthalate	ND mg/kg	0.38	0.050	1	06/22/12 09:02	06/26/12 09:47	84-66-2		
2,4-Dimethylphenol	ND mg/kg	0.38	0.19	1	06/22/12 09:02	06/26/12 09:47	105-67-9		
Dimethylphthalate	ND mg/kg	0.38	0.053	1	06/22/12 09:02	06/26/12 09:47	131-11-3		
Di-n-butylphthalate	ND mg/kg	0.38	0.039	1	06/22/12 09:02	06/26/12 09:47	84-74-2		
4,6-Dinitro-2-methylphenol	ND mg/kg	2.0	0.32	1	06/22/12 09:02	06/26/12 09:47	534-52-1		
2,4-Dinitrophenol	ND mg/kg	2.0	0.054	1	06/22/12 09:02	06/26/12 09:47	51-28-5		
2,4-Dinitrotoluene	ND mg/kg	0.38	0.063	1	06/22/12 09:02	06/26/12 09:47	121-14-2		
2,6-Dinitrotoluene	ND mg/kg	0.38	0.053	1	06/22/12 09:02	06/26/12 09:47	606-20-2		
Di-n-octylphthalate	ND mg/kg	0.38	0.055	1	06/22/12 09:02	06/26/12 09:47	117-84-0		
bis(2-Ethylhexyl)phthalate	ND mg/kg	0.38	0.089	1	06/22/12 09:02	06/26/12 09:47	117-81-7		
Fluoranthene	ND mg/kg	0.38	0.046	1	06/22/12 09:02	06/26/12 09:47	206-44-0		
Fluorene	ND mg/kg	0.38	0.049	1	06/22/12 09:02	06/26/12 09:47	86-73-7		
Hexachloro-1,3-butadiene	ND mg/kg	0.38	0.094	1	06/22/12 09:02	06/26/12 09:47	87-68-3		
Hexachlorobenzene	ND mg/kg	0.38	0.053	1	06/22/12 09:02	06/26/12 09:47	118-74-1		
Hexachlorocyclopentadiene	ND mg/kg	2.0	0.98	1	06/22/12 09:02	06/26/12 09:47	77-47-4		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-04-2.5 Lab ID: 10196172001 Collected: 06/18/12 09:20 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Hexachloroethane	ND mg/kg	0.38	0.090	1	06/22/12 09:02	06/26/12 09:47	67-72-1		
Indeno(1,2,3-cd)pyrene	ND mg/kg	0.38	0.056	1	06/22/12 09:02	06/26/12 09:47	193-39-5		
Isophorone	ND mg/kg	0.38	0.046	1	06/22/12 09:02	06/26/12 09:47	78-59-1		
2-Methylnaphthalene	ND mg/kg	0.38	0.056	1	06/22/12 09:02	06/26/12 09:47	91-57-6		
2-Methylphenol(o-Cresol)	ND mg/kg	0.38	0.058	1	06/22/12 09:02	06/26/12 09:47	95-48-7		
3&4-Methylphenol	ND mg/kg	0.76	0.051	1	06/22/12 09:02	06/26/12 09:47			
Naphthalene	ND mg/kg	0.38	0.074	1	06/22/12 09:02	06/26/12 09:47	91-20-3		
2-Nitroaniline	ND mg/kg	2.0	0.053	1	06/22/12 09:02	06/26/12 09:47	88-74-4		
3-Nitroaniline	ND mg/kg	2.0	0.075	1	06/22/12 09:02	06/26/12 09:47	99-09-2		
4-Nitroaniline	ND mg/kg	2.0	0.39	1	06/22/12 09:02	06/26/12 09:47	100-01-6		
Nitrobenzene	ND mg/kg	0.38	0.076	1	06/22/12 09:02	06/26/12 09:47	98-95-3		
2-Nitrophenol	ND mg/kg	0.38	0.063	1	06/22/12 09:02	06/26/12 09:47	88-75-5		
4-Nitrophenol	ND mg/kg	2.0	0.98	1	06/22/12 09:02	06/26/12 09:47	100-02-7		
N-Nitroso-di-n-propylamine	ND mg/kg	0.38	0.059	1	06/22/12 09:02	06/26/12 09:47	621-64-7		
N-Nitrosodiphenylamine	ND mg/kg	0.38	0.055	1	06/22/12 09:02	06/26/12 09:47	86-30-6		
Pentachlorophenol	ND mg/kg	0.77	0.39	1	06/22/12 09:02	06/26/12 09:47	87-86-5		
Phenanthrene	ND mg/kg	0.38	0.051	1	06/22/12 09:02	06/26/12 09:47	85-01-8		
Phenol	ND mg/kg	0.38	0.069	1	06/22/12 09:02	06/26/12 09:47	108-95-2		
Pyrene	ND mg/kg	0.38	0.053	1	06/22/12 09:02	06/26/12 09:47	129-00-0		
1,2,4-Trichlorobenzene	ND mg/kg	0.38	0.079	1	06/22/12 09:02	06/26/12 09:47	120-82-1		
2,4,5-Trichlorophenol	ND mg/kg	2.0	0.065	1	06/22/12 09:02	06/26/12 09:47	95-95-4		
2,4,6-Trichlorophenol	ND mg/kg	0.38	0.056	1	06/22/12 09:02	06/26/12 09:47	88-06-2		
Surrogates									
Nitrobenzene-d5 (S)	80 %	30-141		1	06/22/12 09:02	06/26/12 09:47	4165-60-0		
2-Fluorobiphenyl (S)	79 %	30-145		1	06/22/12 09:02	06/26/12 09:47	321-60-8		
Terphenyl-d14 (S)	85 %	30-150		1	06/22/12 09:02	06/26/12 09:47	1718-51-0		
Phenol-d6 (S)	74 %	30-142		1	06/22/12 09:02	06/26/12 09:47	13127-88-3		
2-Fluorophenol (S)	70 %	30-137		1	06/22/12 09:02	06/26/12 09:47	367-12-4		
2,4,6-Tribromophenol (S)	89 %	30-150		1	06/22/12 09:02	06/26/12 09:47	118-79-6		
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND mg/kg	1.4	0.71	1	06/21/12 08:43	06/22/12 08:27	67-64-1		
Allyl chloride	ND mg/kg	0.23	0.017	1	06/21/12 08:43	06/22/12 08:27	107-05-1		
Benzene	ND mg/kg	0.023	0.0053	1	06/21/12 08:43	06/22/12 08:27	71-43-2		
Bromobenzene	ND mg/kg	0.057	0.0056	1	06/21/12 08:43	06/22/12 08:27	108-86-1		
Bromochloromethane	ND mg/kg	0.057	0.0097	1	06/21/12 08:43	06/22/12 08:27	74-97-5		
Bromodichloromethane	ND mg/kg	0.057	0.0089	1	06/21/12 08:43	06/22/12 08:27	75-27-4		
Bromoform	ND mg/kg	0.23	0.011	1	06/21/12 08:43	06/22/12 08:27	75-25-2	L3	
Bromomethane	ND mg/kg	0.57	0.024	1	06/21/12 08:43	06/22/12 08:27	74-83-9		
2-Butanone (MEK)	ND mg/kg	0.57	0.28	1	06/21/12 08:43	06/22/12 08:27	78-93-3		
n-Butylbenzene	ND mg/kg	0.057	0.0074	1	06/21/12 08:43	06/22/12 08:27	104-51-8		
sec-Butylbenzene	ND mg/kg	0.057	0.0048	1	06/21/12 08:43	06/22/12 08:27	135-98-8		
tert-Butylbenzene	ND mg/kg	0.057	0.0058	1	06/21/12 08:43	06/22/12 08:27	98-06-6		
Carbon tetrachloride	ND mg/kg	0.057	0.011	1	06/21/12 08:43	06/22/12 08:27	56-23-5		
Chlorobenzene	ND mg/kg	0.057	0.0064	1	06/21/12 08:43	06/22/12 08:27	108-90-7		

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-04-2.5 Lab ID: 10196172001 Collected: 06/18/12 09:20 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Chloroethane	ND mg/kg	0.57	0.026	1	06/21/12 08:43	06/22/12 08:27	75-00-3		
Chloroform	ND mg/kg	0.057	0.0043	1	06/21/12 08:43	06/22/12 08:27	67-66-3		
Chloromethane	ND mg/kg	0.23	0.0075	1	06/21/12 08:43	06/22/12 08:27	74-87-3		
2-Chlorotoluene	ND mg/kg	0.057	0.0076	1	06/21/12 08:43	06/22/12 08:27	95-49-8		
4-Chlorotoluene	ND mg/kg	0.057	0.0072	1	06/21/12 08:43	06/22/12 08:27	106-43-4		
1,2-Dibromo-3-chloropropane	ND mg/kg	0.23	0.026	1	06/21/12 08:43	06/22/12 08:27	96-12-8	L3	
Dibromochloromethane	ND mg/kg	0.057	0.0048	1	06/21/12 08:43	06/22/12 08:27	124-48-1		
1,2-Dibromoethane (EDB)	ND mg/kg	0.057	0.0066	1	06/21/12 08:43	06/22/12 08:27	106-93-4		
Dibromomethane	ND mg/kg	0.057	0.011	1	06/21/12 08:43	06/22/12 08:27	74-95-3		
1,2-Dichlorobenzene	ND mg/kg	0.057	0.0066	1	06/21/12 08:43	06/22/12 08:27	95-50-1		
1,3-Dichlorobenzene	ND mg/kg	0.057	0.0046	1	06/21/12 08:43	06/22/12 08:27	541-73-1		
1,4-Dichlorobenzene	ND mg/kg	0.057	0.0063	1	06/21/12 08:43	06/22/12 08:27	106-46-7		
Dichlorodifluoromethane	ND mg/kg	0.057	0.013	1	06/21/12 08:43	06/22/12 08:27	75-71-8		
1,1-Dichloroethane	ND mg/kg	0.057	0.028	1	06/21/12 08:43	06/22/12 08:27	75-34-3		
1,2-Dichloroethane	ND mg/kg	0.057	0.0074	1	06/21/12 08:43	06/22/12 08:27	107-06-2		
1,1-Dichloroethene	ND mg/kg	0.057	0.0083	1	06/21/12 08:43	06/22/12 08:27	75-35-4		
cis-1,2-Dichloroethene	ND mg/kg	0.057	0.0097	1	06/21/12 08:43	06/22/12 08:27	156-59-2		
trans-1,2-Dichloroethene	ND mg/kg	0.057	0.011	1	06/21/12 08:43	06/22/12 08:27	156-60-5		
Dichlorofluoromethane	ND mg/kg	0.57	0.036	1	06/21/12 08:43	06/22/12 08:27	75-43-4		
1,2-Dichloropropane	ND mg/kg	0.057	0.028	1	06/21/12 08:43	06/22/12 08:27	78-87-5		
1,3-Dichloropropane	ND mg/kg	0.057	0.0070	1	06/21/12 08:43	06/22/12 08:27	142-28-9		
2,2-Dichloropropane	ND mg/kg	0.23	0.0080	1	06/21/12 08:43	06/22/12 08:27	594-20-7		
1,1-Dichloropropene	ND mg/kg	0.057	0.0078	1	06/21/12 08:43	06/22/12 08:27	563-58-6		
cis-1,3-Dichloropropene	ND mg/kg	0.057	0.0088	1	06/21/12 08:43	06/22/12 08:27	10061-01-5		
trans-1,3-Dichloropropene	ND mg/kg	0.057	0.0096	1	06/21/12 08:43	06/22/12 08:27	10061-02-6		
Diethyl ether (Ethyl ether)	ND mg/kg	0.23	0.018	1	06/21/12 08:43	06/22/12 08:27	60-29-7		
Ethylbenzene	ND mg/kg	0.057	0.0047	1	06/21/12 08:43	06/22/12 08:27	100-41-4		
Hexachloro-1,3-butadiene	ND mg/kg	0.28	0.011	1	06/21/12 08:43	06/22/12 08:27	87-68-3		
Isopropylbenzene (Cumene)	ND mg/kg	0.057	0.0068	1	06/21/12 08:43	06/22/12 08:27	98-82-8		
p-Isopropyltoluene	ND mg/kg	0.057	0.0067	1	06/21/12 08:43	06/22/12 08:27	99-87-6		
Methylene Chloride	ND mg/kg	0.23	0.11	1	06/21/12 08:43	06/22/12 08:27	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND mg/kg	0.57	0.28	1	06/21/12 08:43	06/22/12 08:27	108-10-1		
Methyl-tert-butyl ether	ND mg/kg	0.057	0.010	1	06/21/12 08:43	06/22/12 08:27	1634-04-4		
Naphthalene	ND mg/kg	0.23	0.0064	1	06/21/12 08:43	06/22/12 08:27	91-20-3		
n-Propylbenzene	ND mg/kg	0.057	0.0057	1	06/21/12 08:43	06/22/12 08:27	103-65-1		
Styrene	ND mg/kg	0.057	0.028	1	06/21/12 08:43	06/22/12 08:27	100-42-5		
1,1,1,2-Tetrachloroethane	ND mg/kg	0.057	0.028	1	06/21/12 08:43	06/22/12 08:27	630-20-6		
1,1,2,2-Tetrachloroethane	ND mg/kg	0.057	0.010	1	06/21/12 08:43	06/22/12 08:27	79-34-5		
Tetrachloroethene	ND mg/kg	0.057	0.0059	1	06/21/12 08:43	06/22/12 08:27	127-18-4		
Tetrahydrofuran	ND mg/kg	2.3	0.16	1	06/21/12 08:43	06/22/12 08:27	109-99-9		
Toluene	ND mg/kg	0.057	0.0085	1	06/21/12 08:43	06/22/12 08:27	108-88-3		
1,2,3-Trichlorobenzene	ND mg/kg	0.057	0.0085	1	06/21/12 08:43	06/22/12 08:27	87-61-6		
1,2,4-Trichlorobenzene	ND mg/kg	0.057	0.011	1	06/21/12 08:43	06/22/12 08:27	120-82-1		
1,1,1-Trichloroethane	ND mg/kg	0.057	0.0067	1	06/21/12 08:43	06/22/12 08:27	71-55-6		
1,1,2-Trichloroethane	ND mg/kg	0.057	0.014	1	06/21/12 08:43	06/22/12 08:27	79-00-5		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-04-2.5 Lab ID: 10196172001 Collected: 06/18/12 09:20 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Trichloroethene	ND mg/kg		0.057	0.0098	1	06/21/12 08:43	06/22/12 08:27	79-01-6	
Trichlorofluoromethane	ND mg/kg		0.23	0.020	1	06/21/12 08:43	06/22/12 08:27	75-69-4	
1,2,3-Trichloropropane	ND mg/kg		0.23	0.015	1	06/21/12 08:43	06/22/12 08:27	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND mg/kg		0.057	0.0097	1	06/21/12 08:43	06/22/12 08:27	76-13-1	
1,2,4-Trimethylbenzene	ND mg/kg		0.057	0.0068	1	06/21/12 08:43	06/22/12 08:27	95-63-6	
1,3,5-Trimethylbenzene	ND mg/kg		0.057	0.0067	1	06/21/12 08:43	06/22/12 08:27	108-67-8	
Vinyl chloride	ND mg/kg		0.023	0.0084	1	06/21/12 08:43	06/22/12 08:27	75-01-4	
Xylene (Total)	ND mg/kg		0.17	0.019	1	06/21/12 08:43	06/22/12 08:27	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	118 %		55-127		1	06/21/12 08:43	06/22/12 08:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	120 %		49-125		1	06/21/12 08:43	06/22/12 08:27	17060-07-0	
Toluene-d8 (S)	118 %		56-131		1	06/21/12 08:43	06/22/12 08:27	2037-26-5	
4-Bromofluorobenzene (S)	123 %		53-128		1	06/21/12 08:43	06/22/12 08:27	460-00-4	

ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-04-08 Lab ID: 10196172002 Collected: 06/18/12 09:35 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB		Analytical Method: EPA 8082 Preparation Method: EPA 3550							
PCB-1016 (Aroclor 1016)	ND mg/kg		0.034	0.012	1	06/21/12 07:28	06/25/12 19:26	12674-11-2	
PCB-1221 (Aroclor 1221)	ND mg/kg		0.034	0.013	1	06/21/12 07:28	06/25/12 19:26	11104-28-2	
PCB-1232 (Aroclor 1232)	ND mg/kg		0.034	0.015	1	06/21/12 07:28	06/25/12 19:26	11141-16-5	
PCB-1242 (Aroclor 1242)	ND mg/kg		0.034	0.0083	1	06/21/12 07:28	06/25/12 19:26	53469-21-9	
PCB-1248 (Aroclor 1248)	ND mg/kg		0.034	0.0073	1	06/21/12 07:28	06/25/12 19:26	12672-29-6	
PCB-1254 (Aroclor 1254)	ND mg/kg		0.034	0.0093	1	06/21/12 07:28	06/25/12 19:26	11097-69-1	
PCB-1260 (Aroclor 1260)	ND mg/kg		0.034	0.012	1	06/21/12 07:28	06/25/12 19:26	11096-82-5	
PCB-1262 (Aroclor 1262)	ND mg/kg		0.034	0.0041	1	06/21/12 07:28	06/25/12 19:26	37324-23-5	
PCB-1268 (Aroclor 1268)	ND mg/kg		0.034	0.0062	1	06/21/12 07:28	06/25/12 19:26	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	90 %		30-150		1	06/21/12 07:28	06/25/12 19:26	877-09-8	
Decachlorobiphenyl (S)	90 %		30-150		1	06/21/12 07:28	06/25/12 19:26	2051-24-3	
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	ND mg/kg		7.5	0.83	1	06/21/12 09:36	06/22/12 16:54		
Surrogates									
n-Triacontane (S)	93 %		50-150		1	06/21/12 09:36	06/22/12 16:54		
WIGRO GCV		Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Gasoline Range Organics	ND mg/kg		5.1	0.50	1	06/22/12 14:01	06/24/12 06:15		
Surrogates									
a,a,a-Trifluorotoluene (S)	99 %		80-125		1	06/22/12 14:01	06/24/12 06:15	98-08-8	
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	5.2 mg/kg		0.39	0.095	1	06/21/12 13:43	06/22/12 11:52	7440-38-2	
Barium	29.4 mg/kg		0.39	0.016	1	06/21/12 13:43	06/22/12 11:52	7440-39-3	M1
Cadmium	ND mg/kg		0.039	0.016	1	06/21/12 13:43	06/22/12 11:52	7440-43-9	M1
Chromium	7.4 mg/kg		0.39	0.20	1	06/21/12 13:43	06/22/12 11:52	7440-47-3	M1
Lead	1.9 mg/kg		0.24	0.039	1	06/21/12 13:43	06/22/12 11:52	7439-92-1	M1
Selenium	ND mg/kg		0.59	0.13	1	06/21/12 13:43	06/22/12 11:52	7782-49-2	M1
Silver	ND mg/kg		0.39	0.047	1	06/21/12 13:43	06/22/12 11:52	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND mg/kg		0.018	0.0055	1	06/21/12 13:29	06/22/12 17:40	7439-97-6	
Dry Weight		Analytical Method: ASTM D2974							
Percent Moisture	3.9 %		0.10	0.10	1			06/21/12 00:00	
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Acenaphthene	ND mg/kg		0.34	0.041	1	06/22/12 09:02	06/26/12 11:04	83-32-9	
Acenaphthylene	ND mg/kg		0.34	0.040	1	06/22/12 09:02	06/26/12 11:04	208-96-8	
Anthracene	ND mg/kg		0.34	0.044	1	06/22/12 09:02	06/26/12 11:04	120-12-7	
Benzidine	ND mg/kg		1.7	0.83	1	06/22/12 09:02	06/26/12 11:04	92-87-5	CL,L2, SS
Benzo(a)anthracene	ND mg/kg		0.34	0.048	1	06/22/12 09:02	06/26/12 11:04	56-55-3	

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-04-08 Lab ID: 10196172002 Collected: 06/18/12 09:35 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Benzo(a)pyrene	ND mg/kg	0.34	0.049	1	06/22/12 09:02	06/26/12 11:04	50-32-8		
Benzo(b)fluoranthene	ND mg/kg	0.34	0.049	1	06/22/12 09:02	06/26/12 11:04	205-99-2		
Benzo(g,h,i)perylene	ND mg/kg	0.34	0.052	1	06/22/12 09:02	06/26/12 11:04	191-24-2		
Benzo(k)fluoranthene	ND mg/kg	0.34	0.048	1	06/22/12 09:02	06/26/12 11:04	207-08-9		
Benzoic acid	ND mg/kg	1.8	0.47	1	06/22/12 09:02	06/26/12 11:04	65-85-0		
Benzyl alcohol	ND mg/kg	0.68	0.050	1	06/22/12 09:02	06/26/12 11:04	100-51-6		
4-Bromophenylphenyl ether	ND mg/kg	0.34	0.052	1	06/22/12 09:02	06/26/12 11:04	101-55-3		
Butylbenzylphthalate	ND mg/kg	0.34	0.047	1	06/22/12 09:02	06/26/12 11:04	85-68-7		
4-Chloro-3-methylphenol	ND mg/kg	0.34	0.040	1	06/22/12 09:02	06/26/12 11:04	59-50-7		
4-Chloroaniline	ND mg/kg	0.34	0.17	1	06/22/12 09:02	06/26/12 11:04	106-47-8		
bis(2-Chloroethoxy)methane	ND mg/kg	0.34	0.058	1	06/22/12 09:02	06/26/12 11:04	111-91-1		
bis(2-Chloroethyl) ether	ND mg/kg	0.34	0.070	1	06/22/12 09:02	06/26/12 11:04	111-44-4		
bis(2-Chloroisopropyl) ether	ND mg/kg	0.34	0.082	1	06/22/12 09:02	06/26/12 11:04	108-60-1		
2-Chloronaphthalene	ND mg/kg	0.34	0.041	1	06/22/12 09:02	06/26/12 11:04	91-58-7		
2-Chlorophenol	ND mg/kg	0.34	0.075	1	06/22/12 09:02	06/26/12 11:04	95-57-8		
4-Chlorophenylphenyl ether	ND mg/kg	0.34	0.046	1	06/22/12 09:02	06/26/12 11:04	7005-72-3		
Chrysene	ND mg/kg	0.34	0.049	1	06/22/12 09:02	06/26/12 11:04	218-01-9		
Dibenz(a,h)anthracene	ND mg/kg	0.34	0.053	1	06/22/12 09:02	06/26/12 11:04	53-70-3		
Dibenzofuran	ND mg/kg	0.34	0.042	1	06/22/12 09:02	06/26/12 11:04	132-64-9		
1,2-Dichlorobenzene	ND mg/kg	0.34	0.073	1	06/22/12 09:02	06/26/12 11:04	95-50-1		
1,3-Dichlorobenzene	ND mg/kg	0.34	0.078	1	06/22/12 09:02	06/26/12 11:04	541-73-1		
1,4-Dichlorobenzene	ND mg/kg	0.34	0.073	1	06/22/12 09:02	06/26/12 11:04	106-46-7		
3,3'-Dichlorobenzidine	ND mg/kg	0.69	0.35	1	06/22/12 09:02	06/26/12 11:04	91-94-1		
2,4-Dichlorophenol	ND mg/kg	0.34	0.051	1	06/22/12 09:02	06/26/12 11:04	120-83-2		
Diethylphthalate	ND mg/kg	0.34	0.045	1	06/22/12 09:02	06/26/12 11:04	84-66-2		
2,4-Dimethylphenol	ND mg/kg	0.34	0.17	1	06/22/12 09:02	06/26/12 11:04	105-67-9		
Dimethylphthalate	ND mg/kg	0.34	0.048	1	06/22/12 09:02	06/26/12 11:04	131-11-3		
Di-n-butylphthalate	ND mg/kg	0.34	0.035	1	06/22/12 09:02	06/26/12 11:04	84-74-2		
4,6-Dinitro-2-methylphenol	ND mg/kg	1.8	0.29	1	06/22/12 09:02	06/26/12 11:04	534-52-1		
2,4-Dinitrophenol	ND mg/kg	1.8	0.049	1	06/22/12 09:02	06/26/12 11:04	51-28-5		
2,4-Dinitrotoluene	ND mg/kg	0.34	0.057	1	06/22/12 09:02	06/26/12 11:04	121-14-2		
2,6-Dinitrotoluene	ND mg/kg	0.34	0.048	1	06/22/12 09:02	06/26/12 11:04	606-20-2		
Di-n-octylphthalate	ND mg/kg	0.34	0.050	1	06/22/12 09:02	06/26/12 11:04	117-84-0		
bis(2-Ethylhexyl)phthalate	ND mg/kg	0.34	0.080	1	06/22/12 09:02	06/26/12 11:04	117-81-7		
Fluoranthene	ND mg/kg	0.34	0.042	1	06/22/12 09:02	06/26/12 11:04	206-44-0		
Fluorene	ND mg/kg	0.34	0.044	1	06/22/12 09:02	06/26/12 11:04	86-73-7		
Hexachloro-1,3-butadiene	ND mg/kg	0.34	0.085	1	06/22/12 09:02	06/26/12 11:04	87-68-3		
Hexachlorobenzene	ND mg/kg	0.34	0.048	1	06/22/12 09:02	06/26/12 11:04	118-74-1		
Hexachlorocyclopentadiene	ND mg/kg	1.8	0.88	1	06/22/12 09:02	06/26/12 11:04	77-47-4		
Hexachloroethane	ND mg/kg	0.34	0.081	1	06/22/12 09:02	06/26/12 11:04	67-72-1		
Indeno(1,2,3-cd)pyrene	ND mg/kg	0.34	0.050	1	06/22/12 09:02	06/26/12 11:04	193-39-5		
Isophorone	ND mg/kg	0.34	0.041	1	06/22/12 09:02	06/26/12 11:04	78-59-1		
2-Methylnaphthalene	ND mg/kg	0.34	0.051	1	06/22/12 09:02	06/26/12 11:04	91-57-6		
2-Methylphenol(o-Cresol)	ND mg/kg	0.34	0.052	1	06/22/12 09:02	06/26/12 11:04	95-48-7		
3&4-Methylphenol	ND mg/kg	0.68	0.046	1	06/22/12 09:02	06/26/12 11:04			

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-04-08 Lab ID: 10196172002 Collected: 06/18/12 09:35 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Naphthalene	ND mg/kg	0.34	0.067	1	06/22/12 09:02	06/26/12 11:04	91-20-3		
2-Nitroaniline	ND mg/kg	1.8	0.047	1	06/22/12 09:02	06/26/12 11:04	88-74-4		
3-Nitroaniline	ND mg/kg	1.8	0.067	1	06/22/12 09:02	06/26/12 11:04	99-09-2		
4-Nitroaniline	ND mg/kg	1.8	0.35	1	06/22/12 09:02	06/26/12 11:04	100-01-6		
Nitrobenzene	ND mg/kg	0.34	0.069	1	06/22/12 09:02	06/26/12 11:04	98-95-3		
2-Nitrophenol	ND mg/kg	0.34	0.057	1	06/22/12 09:02	06/26/12 11:04	88-75-5		
4-Nitrophenol	ND mg/kg	1.8	0.88	1	06/22/12 09:02	06/26/12 11:04	100-02-7		
N-Nitroso-di-n-propylamine	ND mg/kg	0.34	0.053	1	06/22/12 09:02	06/26/12 11:04	621-64-7		
N-Nitrosodiphenylamine	ND mg/kg	0.34	0.050	1	06/22/12 09:02	06/26/12 11:04	86-30-6		
Pentachlorophenol	ND mg/kg	0.69	0.35	1	06/22/12 09:02	06/26/12 11:04	87-86-5		
Phenanthrone	ND mg/kg	0.34	0.046	1	06/22/12 09:02	06/26/12 11:04	85-01-8		
Phenol	ND mg/kg	0.34	0.062	1	06/22/12 09:02	06/26/12 11:04	108-95-2		
Pyrene	ND mg/kg	0.34	0.048	1	06/22/12 09:02	06/26/12 11:04	129-00-0		
1,2,4-Trichlorobenzene	ND mg/kg	0.34	0.071	1	06/22/12 09:02	06/26/12 11:04	120-82-1		
2,4,5-Trichlorophenol	ND mg/kg	1.8	0.059	1	06/22/12 09:02	06/26/12 11:04	95-95-4		
2,4,6-Trichlorophenol	ND mg/kg	0.34	0.051	1	06/22/12 09:02	06/26/12 11:04	88-06-2		
Surrogates									
Nitrobenzene-d5 (S)	84 %	30-141		1	06/22/12 09:02	06/26/12 11:04	4165-60-0		
2-Fluorobiphenyl (S)	75 %	30-145		1	06/22/12 09:02	06/26/12 11:04	321-60-8		
Terphenyl-d14 (S)	87 %	30-150		1	06/22/12 09:02	06/26/12 11:04	1718-51-0		
Phenol-d6 (S)	76 %	30-142		1	06/22/12 09:02	06/26/12 11:04	13127-88-3		
2-Fluorophenol (S)	76 %	30-137		1	06/22/12 09:02	06/26/12 11:04	367-12-4		
2,4,6-Tribromophenol (S)	80 %	30-150		1	06/22/12 09:02	06/26/12 11:04	118-79-6		
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND mg/kg	1.3	0.65	1	06/21/12 08:43	06/22/12 08:49	67-64-1		
Allyl chloride	ND mg/kg	0.21	0.015	1	06/21/12 08:43	06/22/12 08:49	107-05-1		
Benzene	ND mg/kg	0.021	0.0049	1	06/21/12 08:43	06/22/12 08:49	71-43-2		
Bromobenzene	ND mg/kg	0.052	0.0052	1	06/21/12 08:43	06/22/12 08:49	108-86-1		
Bromochloromethane	ND mg/kg	0.052	0.0090	1	06/21/12 08:43	06/22/12 08:49	74-97-5		
Bromodichloromethane	ND mg/kg	0.052	0.0082	1	06/21/12 08:43	06/22/12 08:49	75-27-4		
Bromoform	ND mg/kg	0.21	0.0097	1	06/21/12 08:43	06/22/12 08:49	75-25-2		
Bromomethane	ND mg/kg	0.52	0.022	1	06/21/12 08:43	06/22/12 08:49	74-83-9		
2-Butanone (MEK)	ND mg/kg	0.52	0.26	1	06/21/12 08:43	06/22/12 08:49	78-93-3		
n-Butylbenzene	ND mg/kg	0.052	0.0068	1	06/21/12 08:43	06/22/12 08:49	104-51-8		
sec-Butylbenzene	ND mg/kg	0.052	0.0044	1	06/21/12 08:43	06/22/12 08:49	135-98-8		
tert-Butylbenzene	ND mg/kg	0.052	0.0054	1	06/21/12 08:43	06/22/12 08:49	98-06-6		
Carbon tetrachloride	ND mg/kg	0.052	0.010	1	06/21/12 08:43	06/22/12 08:49	56-23-5		
Chlorobenzene	ND mg/kg	0.052	0.0060	1	06/21/12 08:43	06/22/12 08:49	108-90-7		
Chloroethane	ND mg/kg	0.52	0.024	1	06/21/12 08:43	06/22/12 08:49	75-00-3		
Chloroform	ND mg/kg	0.052	0.0040	1	06/21/12 08:43	06/22/12 08:49	67-66-3		
Chloromethane	ND mg/kg	0.21	0.0069	1	06/21/12 08:43	06/22/12 08:49	74-87-3		
2-Chlorotoluene	ND mg/kg	0.052	0.0070	1	06/21/12 08:43	06/22/12 08:49	95-49-8		
4-Chlorotoluene	ND mg/kg	0.052	0.0067	1	06/21/12 08:43	06/22/12 08:49	106-43-4		
1,2-Dibromo-3-chloropropane	ND mg/kg	0.21	0.024	1	06/21/12 08:43	06/22/12 08:49	96-12-8		L3

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-04-08 Lab ID: 10196172002 Collected: 06/18/12 09:35 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Dibromochloromethane	ND mg/kg		0.052	0.0044	1	06/21/12 08:43	06/22/12 08:49	124-48-1	
1,2-Dibromoethane (EDB)	ND mg/kg		0.052	0.0061	1	06/21/12 08:43	06/22/12 08:49	106-93-4	
Dibromomethane	ND mg/kg		0.052	0.0098	1	06/21/12 08:43	06/22/12 08:49	74-95-3	
1,2-Dichlorobenzene	ND mg/kg		0.052	0.0061	1	06/21/12 08:43	06/22/12 08:49	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		0.052	0.0042	1	06/21/12 08:43	06/22/12 08:49	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		0.052	0.0058	1	06/21/12 08:43	06/22/12 08:49	106-46-7	
Dichlorodifluoromethane	ND mg/kg		0.052	0.012	1	06/21/12 08:43	06/22/12 08:49	75-71-8	
1,1-Dichloroethane	ND mg/kg		0.052	0.026	1	06/21/12 08:43	06/22/12 08:49	75-34-3	
1,2-Dichloroethane	ND mg/kg		0.052	0.0068	1	06/21/12 08:43	06/22/12 08:49	107-06-2	
1,1-Dichloroethene	ND mg/kg		0.052	0.0076	1	06/21/12 08:43	06/22/12 08:49	75-35-4	
cis-1,2-Dichloroethene	ND mg/kg		0.052	0.0090	1	06/21/12 08:43	06/22/12 08:49	156-59-2	
trans-1,2-Dichloroethene	ND mg/kg		0.052	0.0097	1	06/21/12 08:43	06/22/12 08:49	156-60-5	
Dichlorofluoromethane	ND mg/kg		0.52	0.034	1	06/21/12 08:43	06/22/12 08:49	75-43-4	
1,2-Dichloropropane	ND mg/kg		0.052	0.026	1	06/21/12 08:43	06/22/12 08:49	78-87-5	
1,3-Dichloropropane	ND mg/kg		0.052	0.0064	1	06/21/12 08:43	06/22/12 08:49	142-28-9	
2,2-Dichloropropane	ND mg/kg		0.21	0.0074	1	06/21/12 08:43	06/22/12 08:49	594-20-7	
1,1-Dichloropropene	ND mg/kg		0.052	0.0072	1	06/21/12 08:43	06/22/12 08:49	563-58-6	
cis-1,3-Dichloropropene	ND mg/kg		0.052	0.0081	1	06/21/12 08:43	06/22/12 08:49	10061-01-5	
trans-1,3-Dichloropropene	ND mg/kg		0.052	0.0088	1	06/21/12 08:43	06/22/12 08:49	10061-02-6	
Diethyl ether (Ethyl ether)	ND mg/kg		0.21	0.017	1	06/21/12 08:43	06/22/12 08:49	60-29-7	
Ethylbenzene	ND mg/kg		0.052	0.0044	1	06/21/12 08:43	06/22/12 08:49	100-41-4	
Hexachloro-1,3-butadiene	ND mg/kg		0.26	0.010	1	06/21/12 08:43	06/22/12 08:49	87-68-3	
Isopropylbenzene (Cumene)	ND mg/kg		0.052	0.0063	1	06/21/12 08:43	06/22/12 08:49	98-82-8	
p-Isopropyltoluene	ND mg/kg		0.052	0.0062	1	06/21/12 08:43	06/22/12 08:49	99-87-6	
Methylene Chloride	ND mg/kg		0.21	0.10	1	06/21/12 08:43	06/22/12 08:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND mg/kg		0.52	0.26	1	06/21/12 08:43	06/22/12 08:49	108-10-1	
Methyl-tert-butyl ether	ND mg/kg		0.052	0.0094	1	06/21/12 08:43	06/22/12 08:49	1634-04-4	
Naphthalene	ND mg/kg		0.21	0.0059	1	06/21/12 08:43	06/22/12 08:49	91-20-3	
n-Propylbenzene	ND mg/kg		0.052	0.0053	1	06/21/12 08:43	06/22/12 08:49	103-65-1	
Styrene	ND mg/kg		0.052	0.026	1	06/21/12 08:43	06/22/12 08:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND mg/kg		0.052	0.026	1	06/21/12 08:43	06/22/12 08:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND mg/kg		0.052	0.0097	1	06/21/12 08:43	06/22/12 08:49	79-34-5	
Tetrachloroethene	ND mg/kg		0.052	0.0054	1	06/21/12 08:43	06/22/12 08:49	127-18-4	
Tetrahydrofuran	ND mg/kg		2.1	0.15	1	06/21/12 08:43	06/22/12 08:49	109-99-9	
Toluene	ND mg/kg		0.052	0.0079	1	06/21/12 08:43	06/22/12 08:49	108-88-3	
1,2,3-Trichlorobenzene	ND mg/kg		0.052	0.0078	1	06/21/12 08:43	06/22/12 08:49	87-61-6	
1,2,4-Trichlorobenzene	ND mg/kg		0.052	0.0098	1	06/21/12 08:43	06/22/12 08:49	120-82-1	
1,1,1-Trichloroethane	ND mg/kg		0.052	0.0062	1	06/21/12 08:43	06/22/12 08:49	71-55-6	
1,1,2-Trichloroethane	ND mg/kg		0.052	0.013	1	06/21/12 08:43	06/22/12 08:49	79-00-5	
Trichloroethene	ND mg/kg		0.052	0.0091	1	06/21/12 08:43	06/22/12 08:49	79-01-6	
Trichlorofluoromethane	ND mg/kg		0.21	0.018	1	06/21/12 08:43	06/22/12 08:49	75-69-4	
1,2,3-Trichloropropane	ND mg/kg		0.21	0.014	1	06/21/12 08:43	06/22/12 08:49	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND mg/kg		0.052	0.0090	1	06/21/12 08:43	06/22/12 08:49	76-13-1	
1,2,4-Trimethylbenzene	ND mg/kg		0.052	0.0062	1	06/21/12 08:43	06/22/12 08:49	95-63-6	
1,3,5-Trimethylbenzene	ND mg/kg		0.052	0.0062	1	06/21/12 08:43	06/22/12 08:49	108-67-8	

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-04-08 Lab ID: 10196172002 Collected: 06/18/12 09:35 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	ND	mg/kg	0.021	0.0077	1	06/21/12 08:43	06/22/12 08:49	75-01-4	
Xylene (Total)	ND	mg/kg	0.16	0.017	1	06/21/12 08:43	06/22/12 08:49	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	112 %		55-127		1	06/21/12 08:43	06/22/12 08:49	1868-53-7	
1,2-Dichloroethane-d4 (S)	112 %		49-125		1	06/21/12 08:43	06/22/12 08:49	17060-07-0	
Toluene-d8 (S)	109 %		56-131		1	06/21/12 08:43	06/22/12 08:49	2037-26-5	
4-Bromofluorobenzene (S)	111 %		53-128		1	06/21/12 08:43	06/22/12 08:49	460-00-4	

ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-03-02 **Lab ID: 10196172003** Collected: 06/18/12 10:30 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3550								
PCB-1016 (Aroclor 1016)	ND mg/kg	0.036	0.013	1	06/21/12 07:28	06/25/12 22:38	12674-11-2		
PCB-1221 (Aroclor 1221)	ND mg/kg	0.036	0.014	1	06/21/12 07:28	06/25/12 22:38	11104-28-2		
PCB-1232 (Aroclor 1232)	ND mg/kg	0.036	0.015	1	06/21/12 07:28	06/25/12 22:38	11141-16-5		
PCB-1242 (Aroclor 1242)	ND mg/kg	0.036	0.0086	1	06/21/12 07:28	06/25/12 22:38	53469-21-9		
PCB-1248 (Aroclor 1248)	ND mg/kg	0.036	0.0075	1	06/21/12 07:28	06/25/12 22:38	12672-29-6		
PCB-1254 (Aroclor 1254)	ND mg/kg	0.036	0.0097	1	06/21/12 07:28	06/25/12 22:38	11097-69-1		
PCB-1260 (Aroclor 1260)	ND mg/kg	0.036	0.013	1	06/21/12 07:28	06/25/12 22:38	11096-82-5		
PCB-1262 (Aroclor 1262)	ND mg/kg	0.036	0.0043	1	06/21/12 07:28	06/25/12 22:38	37324-23-5		
PCB-1268 (Aroclor 1268)	ND mg/kg	0.036	0.0065	1	06/21/12 07:28	06/25/12 22:38	11100-14-4		
Surrogates									
Tetrachloro-m-xylene (S)	89 %	30-150		1	06/21/12 07:28	06/25/12 22:38	877-09-8		
Decachlorobiphenyl (S)	144 %	30-150		1	06/21/12 07:28	06/25/12 22:38	2051-24-3	CL	
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	45.6 mg/kg	14.5	1.6	2	06/21/12 09:36	06/23/12 11:31			T6
Surrogates									
n-Triacontane (S)	83 %	50-150		2	06/21/12 09:36	06/23/12 11:31			
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	ND mg/kg	5.2	0.51	1	06/22/12 14:01	06/24/12 06:35			
Surrogates									
a,a,a-Trifluorotoluene (S)	100 %	80-125		1	06/22/12 14:01	06/24/12 06:35	98-08-8		
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	7.2 mg/kg	0.43	0.10	1	06/21/12 13:43	06/22/12 12:09	7440-38-2		
Barium	43.0 mg/kg	0.43	0.017	1	06/21/12 13:43	06/22/12 12:09	7440-39-3		
Cadmium	ND mg/kg	0.043	0.017	1	06/21/12 13:43	06/22/12 12:09	7440-43-9		
Chromium	7.5 mg/kg	0.43	0.21	1	06/21/12 13:43	06/22/12 12:09	7440-47-3		
Lead	37.6 mg/kg	0.26	0.043	1	06/21/12 13:43	06/22/12 12:09	7439-92-1		
Selenium	ND mg/kg	0.64	0.15	1	06/21/12 13:43	06/22/12 12:09	7782-49-2		
Silver	ND mg/kg	0.43	0.051	1	06/21/12 13:43	06/22/12 12:09	7440-22-4		
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	ND mg/kg	0.020	0.0061	1	06/21/12 13:29	06/22/12 17:42	7439-97-6		
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	7.2 %	0.10	0.10	1			06/21/12 00:00		
8270 MSSV	Analytical Method: EPA 8270 Preparation Method: EPA 3550								
Acenaphthene	ND mg/kg	0.35	0.042	1	06/22/12 09:02	06/26/12 15:09	83-32-9		
Acenaphthylene	ND mg/kg	0.35	0.041	1	06/22/12 09:02	06/26/12 15:09	208-96-8		
Anthracene	ND mg/kg	0.35	0.046	1	06/22/12 09:02	06/26/12 15:09	120-12-7		
Benzidine	ND mg/kg	1.7	0.86	1	06/22/12 09:02	06/26/12 15:09	92-87-5	CL,L2, SS	
Benzo(a)anthracene	ND mg/kg	0.35	0.050	1	06/22/12 09:02	06/26/12 15:09	56-55-3		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-03-02 **Lab ID: 10196172003** Collected: 06/18/12 10:30 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Benzo(a)pyrene	ND mg/kg	0.35	0.051	1	06/22/12 09:02	06/26/12 15:09	50-32-8		
Benzo(b)fluoranthene	0.47 mg/kg	0.35	0.051	1	06/22/12 09:02	06/26/12 15:09	205-99-2		
Benzo(g,h,i)perylene	ND mg/kg	0.35	0.054	1	06/22/12 09:02	06/26/12 15:09	191-24-2		
Benzo(k)fluoranthene	ND mg/kg	0.35	0.049	1	06/22/12 09:02	06/26/12 15:09	207-08-9		
Benzoic acid	ND mg/kg	1.8	0.49	1	06/22/12 09:02	06/26/12 15:09	65-85-0		
Benzyl alcohol	ND mg/kg	0.71	0.052	1	06/22/12 09:02	06/26/12 15:09	100-51-6		
4-Bromophenylphenyl ether	ND mg/kg	0.35	0.054	1	06/22/12 09:02	06/26/12 15:09	101-55-3		
Butylbenzylphthalate	ND mg/kg	0.35	0.048	1	06/22/12 09:02	06/26/12 15:09	85-68-7		
4-Chloro-3-methylphenol	ND mg/kg	0.35	0.042	1	06/22/12 09:02	06/26/12 15:09	59-50-7		
4-Chloroaniline	ND mg/kg	0.35	0.18	1	06/22/12 09:02	06/26/12 15:09	106-47-8		
bis(2-Chloroethoxy)methane	ND mg/kg	0.35	0.060	1	06/22/12 09:02	06/26/12 15:09	111-91-1		
bis(2-Chloroethyl) ether	ND mg/kg	0.35	0.073	1	06/22/12 09:02	06/26/12 15:09	111-44-4		
bis(2-Chloroisopropyl) ether	ND mg/kg	0.35	0.085	1	06/22/12 09:02	06/26/12 15:09	108-60-1		
2-Chloronaphthalene	ND mg/kg	0.35	0.043	1	06/22/12 09:02	06/26/12 15:09	91-58-7		
2-Chlorophenol	ND mg/kg	0.35	0.078	1	06/22/12 09:02	06/26/12 15:09	95-57-8		
4-Chlorophenylphenyl ether	ND mg/kg	0.35	0.048	1	06/22/12 09:02	06/26/12 15:09	7005-72-3		
Chrysene	ND mg/kg	0.35	0.051	1	06/22/12 09:02	06/26/12 15:09	218-01-9		
Dibenz(a,h)anthracene	ND mg/kg	0.35	0.055	1	06/22/12 09:02	06/26/12 15:09	53-70-3		
Dibenzofuran	ND mg/kg	0.35	0.043	1	06/22/12 09:02	06/26/12 15:09	132-64-9		
1,2-Dichlorobenzene	ND mg/kg	0.35	0.076	1	06/22/12 09:02	06/26/12 15:09	95-50-1		
1,3-Dichlorobenzene	ND mg/kg	0.35	0.081	1	06/22/12 09:02	06/26/12 15:09	541-73-1		
1,4-Dichlorobenzene	ND mg/kg	0.35	0.076	1	06/22/12 09:02	06/26/12 15:09	106-46-7		
3,3'-Dichlorobenzidine	ND mg/kg	0.72	0.36	1	06/22/12 09:02	06/26/12 15:09	91-94-1		
2,4-Dichlorophenol	ND mg/kg	0.35	0.053	1	06/22/12 09:02	06/26/12 15:09	120-83-2		
Diethylphthalate	ND mg/kg	0.35	0.047	1	06/22/12 09:02	06/26/12 15:09	84-66-2		
2,4-Dimethylphenol	ND mg/kg	0.35	0.18	1	06/22/12 09:02	06/26/12 15:09	105-67-9		
Dimethylphthalate	ND mg/kg	0.35	0.049	1	06/22/12 09:02	06/26/12 15:09	131-11-3		
Di-n-butylphthalate	ND mg/kg	0.35	0.037	1	06/22/12 09:02	06/26/12 15:09	84-74-2		
4,6-Dinitro-2-methylphenol	ND mg/kg	1.8	0.30	1	06/22/12 09:02	06/26/12 15:09	534-52-1		
2,4-Dinitrophenol	ND mg/kg	1.8	0.051	1	06/22/12 09:02	06/26/12 15:09	51-28-5		
2,4-Dinitrotoluene	ND mg/kg	0.35	0.059	1	06/22/12 09:02	06/26/12 15:09	121-14-2		
2,6-Dinitrotoluene	ND mg/kg	0.35	0.050	1	06/22/12 09:02	06/26/12 15:09	606-20-2		
Di-n-octylphthalate	ND mg/kg	0.35	0.052	1	06/22/12 09:02	06/26/12 15:09	117-84-0		
bis(2-Ethylhexyl)phthalate	ND mg/kg	0.35	0.083	1	06/22/12 09:02	06/26/12 15:09	117-81-7		
Fluoranthene	0.41 mg/kg	0.35	0.043	1	06/22/12 09:02	06/26/12 15:09	206-44-0		
Fluorene	ND mg/kg	0.35	0.046	1	06/22/12 09:02	06/26/12 15:09	86-73-7		
Hexachloro-1,3-butadiene	ND mg/kg	0.35	0.088	1	06/22/12 09:02	06/26/12 15:09	87-68-3		
Hexachlorobenzene	ND mg/kg	0.35	0.050	1	06/22/12 09:02	06/26/12 15:09	118-74-1		
Hexachlorocyclopentadiene	ND mg/kg	1.8	0.91	1	06/22/12 09:02	06/26/12 15:09	77-47-4		
Hexachloroethane	ND mg/kg	0.35	0.084	1	06/22/12 09:02	06/26/12 15:09	67-72-1		
Indeno(1,2,3-cd)pyrene	ND mg/kg	0.35	0.052	1	06/22/12 09:02	06/26/12 15:09	193-39-5		
Isophorone	ND mg/kg	0.35	0.043	1	06/22/12 09:02	06/26/12 15:09	78-59-1		
2-Methylnaphthalene	ND mg/kg	0.35	0.052	1	06/22/12 09:02	06/26/12 15:09	91-57-6		
2-Methylphenol(o-Cresol)	ND mg/kg	0.35	0.054	1	06/22/12 09:02	06/26/12 15:09	95-48-7		
3&4-Methylphenol	ND mg/kg	0.71	0.048	1	06/22/12 09:02	06/26/12 15:09			

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-03-02 Lab ID: 10196172003 Collected: 06/18/12 10:30 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Naphthalene	ND mg/kg	0.35	0.069	1	06/22/12 09:02	06/26/12 15:09	91-20-3		
2-Nitroaniline	ND mg/kg	1.8	0.049	1	06/22/12 09:02	06/26/12 15:09	88-74-4		
3-Nitroaniline	ND mg/kg	1.8	0.070	1	06/22/12 09:02	06/26/12 15:09	99-09-2		
4-Nitroaniline	ND mg/kg	1.8	0.37	1	06/22/12 09:02	06/26/12 15:09	100-01-6		
Nitrobenzene	ND mg/kg	0.35	0.071	1	06/22/12 09:02	06/26/12 15:09	98-95-3		
2-Nitrophenol	ND mg/kg	0.35	0.059	1	06/22/12 09:02	06/26/12 15:09	88-75-5		
4-Nitrophenol	ND mg/kg	1.8	0.91	1	06/22/12 09:02	06/26/12 15:09	100-02-7		
N-Nitroso-di-n-propylamine	ND mg/kg	0.35	0.055	1	06/22/12 09:02	06/26/12 15:09	621-64-7		
N-Nitrosodiphenylamine	ND mg/kg	0.35	0.051	1	06/22/12 09:02	06/26/12 15:09	86-30-6		
Pentachlorophenol	ND mg/kg	0.72	0.36	1	06/22/12 09:02	06/26/12 15:09	87-86-5		
Phenanthrene	ND mg/kg	0.35	0.047	1	06/22/12 09:02	06/26/12 15:09	85-01-8		
Phenol	ND mg/kg	0.35	0.064	1	06/22/12 09:02	06/26/12 15:09	108-95-2		
Pyrene	0.40 mg/kg	0.35	0.049	1	06/22/12 09:02	06/26/12 15:09	129-00-0		
1,2,4-Trichlorobenzene	ND mg/kg	0.35	0.073	1	06/22/12 09:02	06/26/12 15:09	120-82-1		
2,4,5-Trichlorophenol	ND mg/kg	1.8	0.061	1	06/22/12 09:02	06/26/12 15:09	95-95-4		
2,4,6-Trichlorophenol	ND mg/kg	0.35	0.053	1	06/22/12 09:02	06/26/12 15:09	88-06-2		
Surrogates									
Nitrobenzene-d5 (S)	77 %	30-141		1	06/22/12 09:02	06/26/12 15:09	4165-60-0		
2-Fluorobiphenyl (S)	77 %	30-145		1	06/22/12 09:02	06/26/12 15:09	321-60-8		
Terphenyl-d14 (S)	79 %	30-150		1	06/22/12 09:02	06/26/12 15:09	1718-51-0		
Phenol-d6 (S)	76 %	30-142		1	06/22/12 09:02	06/26/12 15:09	13127-88-3		
2-Fluorophenol (S)	74 %	30-137		1	06/22/12 09:02	06/26/12 15:09	367-12-4		
2,4,6-Tribromophenol (S)	78 %	30-150		1	06/22/12 09:02	06/26/12 15:09	118-79-6		
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND mg/kg	1.3	0.66	1	06/21/12 08:43	06/22/12 09:10	67-64-1		
Allyl chloride	ND mg/kg	0.21	0.015	1	06/21/12 08:43	06/22/12 09:10	107-05-1		
Benzene	ND mg/kg	0.021	0.0050	1	06/21/12 08:43	06/22/12 09:10	71-43-2		
Bromobenzene	ND mg/kg	0.053	0.0053	1	06/21/12 08:43	06/22/12 09:10	108-86-1		
Bromochloromethane	ND mg/kg	0.053	0.0091	1	06/21/12 08:43	06/22/12 09:10	74-97-5		
Bromodichloromethane	ND mg/kg	0.053	0.0084	1	06/21/12 08:43	06/22/12 09:10	75-27-4		
Bromoform	ND mg/kg	0.21	0.0099	1	06/21/12 08:43	06/22/12 09:10	75-25-2		
Bromomethane	ND mg/kg	0.53	0.023	1	06/21/12 08:43	06/22/12 09:10	74-83-9		
2-Butanone (MEK)	ND mg/kg	0.53	0.27	1	06/21/12 08:43	06/22/12 09:10	78-93-3		
n-Butylbenzene	ND mg/kg	0.053	0.0069	1	06/21/12 08:43	06/22/12 09:10	104-51-8		
sec-Butylbenzene	ND mg/kg	0.053	0.0045	1	06/21/12 08:43	06/22/12 09:10	135-98-8		
tert-Butylbenzene	ND mg/kg	0.053	0.0055	1	06/21/12 08:43	06/22/12 09:10	98-06-6		
Carbon tetrachloride	ND mg/kg	0.053	0.010	1	06/21/12 08:43	06/22/12 09:10	56-23-5		
Chlorobenzene	ND mg/kg	0.053	0.0060	1	06/21/12 08:43	06/22/12 09:10	108-90-7		
Chloroethane	ND mg/kg	0.53	0.024	1	06/21/12 08:43	06/22/12 09:10	75-00-3		
Chloroform	ND mg/kg	0.053	0.0040	1	06/21/12 08:43	06/22/12 09:10	67-66-3		
Chloromethane	ND mg/kg	0.21	0.0070	1	06/21/12 08:43	06/22/12 09:10	74-87-3		
2-Chlorotoluene	ND mg/kg	0.053	0.0071	1	06/21/12 08:43	06/22/12 09:10	95-49-8		
4-Chlorotoluene	ND mg/kg	0.053	0.0068	1	06/21/12 08:43	06/22/12 09:10	106-43-4		
1,2-Dibromo-3-chloropropane	ND mg/kg	0.21	0.024	1	06/21/12 08:43	06/22/12 09:10	96-12-8		L3

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-03-02 Lab ID: 10196172003 Collected: 06/18/12 10:30 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Dibromochloromethane	ND mg/kg		0.053	0.0045	1	06/21/12 08:43	06/22/12 09:10	124-48-1	
1,2-Dibromoethane (EDB)	ND mg/kg		0.053	0.0062	1	06/21/12 08:43	06/22/12 09:10	106-93-4	
Dibromomethane	ND mg/kg		0.053	0.010	1	06/21/12 08:43	06/22/12 09:10	74-95-3	
1,2-Dichlorobenzene	ND mg/kg		0.053	0.0062	1	06/21/12 08:43	06/22/12 09:10	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		0.053	0.0043	1	06/21/12 08:43	06/22/12 09:10	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		0.053	0.0059	1	06/21/12 08:43	06/22/12 09:10	106-46-7	
Dichlorodifluoromethane	ND mg/kg		0.053	0.012	1	06/21/12 08:43	06/22/12 09:10	75-71-8	
1,1-Dichloroethane	ND mg/kg		0.053	0.027	1	06/21/12 08:43	06/22/12 09:10	75-34-3	
1,2-Dichloroethane	ND mg/kg		0.053	0.0069	1	06/21/12 08:43	06/22/12 09:10	107-06-2	
1,1-Dichloroethene	ND mg/kg		0.053	0.0077	1	06/21/12 08:43	06/22/12 09:10	75-35-4	
cis-1,2-Dichloroethene	ND mg/kg		0.053	0.0091	1	06/21/12 08:43	06/22/12 09:10	156-59-2	
trans-1,2-Dichloroethene	ND mg/kg		0.053	0.0099	1	06/21/12 08:43	06/22/12 09:10	156-60-5	
Dichlorofluoromethane	ND mg/kg		0.53	0.034	1	06/21/12 08:43	06/22/12 09:10	75-43-4	
1,2-Dichloropropane	ND mg/kg		0.053	0.027	1	06/21/12 08:43	06/22/12 09:10	78-87-5	
1,3-Dichloropropane	ND mg/kg		0.053	0.0065	1	06/21/12 08:43	06/22/12 09:10	142-28-9	
2,2-Dichloropropane	ND mg/kg		0.21	0.0075	1	06/21/12 08:43	06/22/12 09:10	594-20-7	
1,1-Dichloropropene	ND mg/kg		0.053	0.0073	1	06/21/12 08:43	06/22/12 09:10	563-58-6	
cis-1,3-Dichloropropene	ND mg/kg		0.053	0.0082	1	06/21/12 08:43	06/22/12 09:10	10061-01-5	
trans-1,3-Dichloropropene	ND mg/kg		0.053	0.0090	1	06/21/12 08:43	06/22/12 09:10	10061-02-6	
Diethyl ether (Ethyl ether)	ND mg/kg		0.21	0.017	1	06/21/12 08:43	06/22/12 09:10	60-29-7	
Ethylbenzene	ND mg/kg		0.053	0.0044	1	06/21/12 08:43	06/22/12 09:10	100-41-4	
Hexachloro-1,3-butadiene	ND mg/kg		0.27	0.011	1	06/21/12 08:43	06/22/12 09:10	87-68-3	
Isopropylbenzene (Cumene)	ND mg/kg		0.053	0.0064	1	06/21/12 08:43	06/22/12 09:10	98-82-8	
p-Isopropyltoluene	ND mg/kg		0.053	0.0063	1	06/21/12 08:43	06/22/12 09:10	99-87-6	
Methylene Chloride	ND mg/kg		0.21	0.11	1	06/21/12 08:43	06/22/12 09:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND mg/kg		0.53	0.27	1	06/21/12 08:43	06/22/12 09:10	108-10-1	
Methyl-tert-butyl ether	ND mg/kg		0.053	0.0095	1	06/21/12 08:43	06/22/12 09:10	1634-04-4	
Naphthalene	ND mg/kg		0.21	0.0060	1	06/21/12 08:43	06/22/12 09:10	91-20-3	
n-Propylbenzene	ND mg/kg		0.053	0.0053	1	06/21/12 08:43	06/22/12 09:10	103-65-1	
Styrene	ND mg/kg		0.053	0.027	1	06/21/12 08:43	06/22/12 09:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND mg/kg		0.053	0.027	1	06/21/12 08:43	06/22/12 09:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND mg/kg		0.053	0.0098	1	06/21/12 08:43	06/22/12 09:10	79-34-5	
Tetrachloroethene	ND mg/kg		0.053	0.0055	1	06/21/12 08:43	06/22/12 09:10	127-18-4	
Tetrahydrofuran	ND mg/kg		2.1	0.15	1	06/21/12 08:43	06/22/12 09:10	109-99-9	
Toluene	ND mg/kg		0.053	0.0080	1	06/21/12 08:43	06/22/12 09:10	108-88-3	
1,2,3-Trichlorobenzene	ND mg/kg		0.053	0.0080	1	06/21/12 08:43	06/22/12 09:10	87-61-6	
1,2,4-Trichlorobenzene	ND mg/kg		0.053	0.010	1	06/21/12 08:43	06/22/12 09:10	120-82-1	
1,1,1-Trichloroethane	ND mg/kg		0.053	0.0063	1	06/21/12 08:43	06/22/12 09:10	71-55-6	
1,1,2-Trichloroethane	ND mg/kg		0.053	0.013	1	06/21/12 08:43	06/22/12 09:10	79-00-5	
Trichloroethene	ND mg/kg		0.053	0.0092	1	06/21/12 08:43	06/22/12 09:10	79-01-6	
Trichlorofluoromethane	ND mg/kg		0.21	0.019	1	06/21/12 08:43	06/22/12 09:10	75-69-4	
1,2,3-Trichloropropane	ND mg/kg		0.21	0.014	1	06/21/12 08:43	06/22/12 09:10	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND mg/kg		0.053	0.0091	1	06/21/12 08:43	06/22/12 09:10	76-13-1	
1,2,4-Trimethylbenzene	ND mg/kg		0.053	0.0063	1	06/21/12 08:43	06/22/12 09:10	95-63-6	
1,3,5-Trimethylbenzene	ND mg/kg		0.053	0.0063	1	06/21/12 08:43	06/22/12 09:10	108-67-8	

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-03-02 Lab ID: 10196172003 Collected: 06/18/12 10:30 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	ND	mg/kg	0.021	0.0079	1	06/21/12 08:43	06/22/12 09:10	75-01-4	
Xylene (Total)	ND	mg/kg	0.16	0.018	1	06/21/12 08:43	06/22/12 09:10	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	101 %		55-127		1	06/21/12 08:43	06/22/12 09:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		49-125		1	06/21/12 08:43	06/22/12 09:10	17060-07-0	
Toluene-d8 (S)	100 %		56-131		1	06/21/12 08:43	06/22/12 09:10	2037-26-5	
4-Bromofluorobenzene (S)	99 %		53-128		1	06/21/12 08:43	06/22/12 09:10	460-00-4	

ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-03-07 **Lab ID: 10196172004** Collected: 06/18/12 10:45 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB		Analytical Method: EPA 8082 Preparation Method: EPA 3550							
PCB-1016 (Aroclor 1016)	ND mg/kg		0.034	0.012	1	06/21/12 07:28	06/25/12 19:42	12674-11-2	
PCB-1221 (Aroclor 1221)	ND mg/kg		0.034	0.013	1	06/21/12 07:28	06/25/12 19:42	11104-28-2	
PCB-1232 (Aroclor 1232)	ND mg/kg		0.034	0.015	1	06/21/12 07:28	06/25/12 19:42	11141-16-5	
PCB-1242 (Aroclor 1242)	ND mg/kg		0.034	0.0083	1	06/21/12 07:28	06/25/12 19:42	53469-21-9	
PCB-1248 (Aroclor 1248)	ND mg/kg		0.034	0.0073	1	06/21/12 07:28	06/25/12 19:42	12672-29-6	
PCB-1254 (Aroclor 1254)	ND mg/kg		0.034	0.0093	1	06/21/12 07:28	06/25/12 19:42	11097-69-1	
PCB-1260 (Aroclor 1260)	ND mg/kg		0.034	0.012	1	06/21/12 07:28	06/25/12 19:42	11096-82-5	
PCB-1262 (Aroclor 1262)	ND mg/kg		0.034	0.0041	1	06/21/12 07:28	06/25/12 19:42	37324-23-5	
PCB-1268 (Aroclor 1268)	ND mg/kg		0.034	0.0062	1	06/21/12 07:28	06/25/12 19:42	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	79 %	30-150			1	06/21/12 07:28	06/25/12 19:42	877-09-8	
Decachlorobiphenyl (S)	85 %	30-150			1	06/21/12 07:28	06/25/12 19:42	2051-24-3	
WIDRO GCS									
Diesel Range Organics	ND mg/kg		7.8	0.85	1	06/21/12 09:36	06/22/12 17:05		
Surrogates									
n-Triacontane (S)	95 %	50-150			1	06/21/12 09:36	06/22/12 17:05		
WIGRO GCV									
Gasoline Range Organics	ND mg/kg		5.1	0.50	1	06/22/12 14:01	06/24/12 06:54		
Surrogates									
a,a,a-Trifluorotoluene (S)	99 %	80-125			1	06/22/12 14:01	06/24/12 06:54	98-08-8	
6010 MET ICP									
Arsenic	5.0 mg/kg		0.40	0.096	1	06/21/12 13:43	06/22/12 12:15	7440-38-2	
Barium	28.1 mg/kg		0.40	0.016	1	06/21/12 13:43	06/22/12 12:15	7440-39-3	
Cadmium	ND mg/kg		0.040	0.016	1	06/21/12 13:43	06/22/12 12:15	7440-43-9	
Chromium	6.1 mg/kg		0.40	0.20	1	06/21/12 13:43	06/22/12 12:15	7440-47-3	
Lead	1.4 mg/kg		0.24	0.040	1	06/21/12 13:43	06/22/12 12:15	7439-92-1	
Selenium	ND mg/kg		0.60	0.14	1	06/21/12 13:43	06/22/12 12:15	7782-49-2	
Silver	ND mg/kg		0.40	0.048	1	06/21/12 13:43	06/22/12 12:15	7440-22-4	
7471 Mercury									
Mercury	ND mg/kg		0.018	0.0053	1	06/21/12 13:29	06/22/12 17:44	7439-97-6	
Dry Weight									
Percent Moisture	3.8 %	0.10	0.10		1		06/21/12 00:00		
8270 MSSV									
Acenaphthene	ND mg/kg		0.34	0.041	1	06/22/12 09:02	06/26/12 11:30	83-32-9	
Acenaphthylene	ND mg/kg		0.34	0.040	1	06/22/12 09:02	06/26/12 11:30	208-96-8	
Anthracene	ND mg/kg		0.34	0.044	1	06/22/12 09:02	06/26/12 11:30	120-12-7	
Benzidine	ND mg/kg		1.7	0.83	1	06/22/12 09:02	06/26/12 11:30	92-87-5	CL,L2, SS
Benzo(a)anthracene	ND mg/kg		0.34	0.048	1	06/22/12 09:02	06/26/12 11:30	56-55-3	

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-03-07 Lab ID: 10196172004 Collected: 06/18/12 10:45 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Benzo(a)pyrene	ND mg/kg	0.34	0.049	1	06/22/12 09:02	06/26/12 11:30	50-32-8		
Benzo(b)fluoranthene	ND mg/kg	0.34	0.049	1	06/22/12 09:02	06/26/12 11:30	205-99-2		
Benzo(g,h,i)perylene	ND mg/kg	0.34	0.052	1	06/22/12 09:02	06/26/12 11:30	191-24-2		
Benzo(k)fluoranthene	ND mg/kg	0.34	0.048	1	06/22/12 09:02	06/26/12 11:30	207-08-9		
Benzoic acid	ND mg/kg	1.8	0.47	1	06/22/12 09:02	06/26/12 11:30	65-85-0		
Benzyl alcohol	ND mg/kg	0.68	0.050	1	06/22/12 09:02	06/26/12 11:30	100-51-6		
4-Bromophenylphenyl ether	ND mg/kg	0.34	0.052	1	06/22/12 09:02	06/26/12 11:30	101-55-3		
Butylbenzylphthalate	ND mg/kg	0.34	0.047	1	06/22/12 09:02	06/26/12 11:30	85-68-7		
4-Chloro-3-methylphenol	ND mg/kg	0.34	0.040	1	06/22/12 09:02	06/26/12 11:30	59-50-7		
4-Chloroaniline	ND mg/kg	0.34	0.17	1	06/22/12 09:02	06/26/12 11:30	106-47-8		
bis(2-Chloroethoxy)methane	ND mg/kg	0.34	0.058	1	06/22/12 09:02	06/26/12 11:30	111-91-1		
bis(2-Chloroethyl) ether	ND mg/kg	0.34	0.070	1	06/22/12 09:02	06/26/12 11:30	111-44-4		
bis(2-Chloroisopropyl) ether	ND mg/kg	0.34	0.082	1	06/22/12 09:02	06/26/12 11:30	108-60-1		
2-Chloronaphthalene	ND mg/kg	0.34	0.041	1	06/22/12 09:02	06/26/12 11:30	91-58-7		
2-Chlorophenol	ND mg/kg	0.34	0.075	1	06/22/12 09:02	06/26/12 11:30	95-57-8		
4-Chlorophenylphenyl ether	ND mg/kg	0.34	0.046	1	06/22/12 09:02	06/26/12 11:30	7005-72-3		
Chrysene	ND mg/kg	0.34	0.049	1	06/22/12 09:02	06/26/12 11:30	218-01-9		
Dibenz(a,h)anthracene	ND mg/kg	0.34	0.053	1	06/22/12 09:02	06/26/12 11:30	53-70-3		
Dibenzo furan	ND mg/kg	0.34	0.042	1	06/22/12 09:02	06/26/12 11:30	132-64-9		
1,2-Dichlorobenzene	ND mg/kg	0.34	0.073	1	06/22/12 09:02	06/26/12 11:30	95-50-1		
1,3-Dichlorobenzene	ND mg/kg	0.34	0.078	1	06/22/12 09:02	06/26/12 11:30	541-73-1		
1,4-Dichlorobenzene	ND mg/kg	0.34	0.073	1	06/22/12 09:02	06/26/12 11:30	106-46-7		
3,3'-Dichlorobenzidine	ND mg/kg	0.69	0.35	1	06/22/12 09:02	06/26/12 11:30	91-94-1		
2,4-Dichlorophenol	ND mg/kg	0.34	0.051	1	06/22/12 09:02	06/26/12 11:30	120-83-2		
Diethylphthalate	ND mg/kg	0.34	0.045	1	06/22/12 09:02	06/26/12 11:30	84-66-2		
2,4-Dimethylphenol	ND mg/kg	0.34	0.17	1	06/22/12 09:02	06/26/12 11:30	105-67-9		
Dimethylphthalate	ND mg/kg	0.34	0.048	1	06/22/12 09:02	06/26/12 11:30	131-11-3		
Di-n-butylphthalate	ND mg/kg	0.34	0.035	1	06/22/12 09:02	06/26/12 11:30	84-74-2		
4,6-Dinitro-2-methylphenol	ND mg/kg	1.8	0.29	1	06/22/12 09:02	06/26/12 11:30	534-52-1		
2,4-Dinitrophenol	ND mg/kg	1.8	0.049	1	06/22/12 09:02	06/26/12 11:30	51-28-5		
2,4-Dinitrotoluene	ND mg/kg	0.34	0.057	1	06/22/12 09:02	06/26/12 11:30	121-14-2		
2,6-Dinitrotoluene	ND mg/kg	0.34	0.048	1	06/22/12 09:02	06/26/12 11:30	606-20-2		
Di-n-octylphthalate	ND mg/kg	0.34	0.050	1	06/22/12 09:02	06/26/12 11:30	117-84-0		
bis(2-Ethylhexyl)phthalate	ND mg/kg	0.34	0.080	1	06/22/12 09:02	06/26/12 11:30	117-81-7		
Fluoranthene	ND mg/kg	0.34	0.042	1	06/22/12 09:02	06/26/12 11:30	206-44-0		
Fluorene	ND mg/kg	0.34	0.044	1	06/22/12 09:02	06/26/12 11:30	86-73-7		
Hexachloro-1,3-butadiene	ND mg/kg	0.34	0.085	1	06/22/12 09:02	06/26/12 11:30	87-68-3		
Hexachlorobenzene	ND mg/kg	0.34	0.048	1	06/22/12 09:02	06/26/12 11:30	118-74-1		
Hexachlorocyclopentadiene	ND mg/kg	1.8	0.88	1	06/22/12 09:02	06/26/12 11:30	77-47-4		
Hexachloroethane	ND mg/kg	0.34	0.081	1	06/22/12 09:02	06/26/12 11:30	67-72-1		
Indeno(1,2,3-cd)pyrene	ND mg/kg	0.34	0.050	1	06/22/12 09:02	06/26/12 11:30	193-39-5		
Isophorone	ND mg/kg	0.34	0.041	1	06/22/12 09:02	06/26/12 11:30	78-59-1		
2-Methylnaphthalene	ND mg/kg	0.34	0.051	1	06/22/12 09:02	06/26/12 11:30	91-57-6		
2-Methylphenol(o-Cresol)	ND mg/kg	0.34	0.052	1	06/22/12 09:02	06/26/12 11:30	95-48-7		
3&4-Methylphenol	ND mg/kg	0.68	0.046	1	06/22/12 09:02	06/26/12 11:30			

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-03-07 Lab ID: 10196172004 Collected: 06/18/12 10:45 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Naphthalene	ND mg/kg	0.34	0.067	1	06/22/12 09:02	06/26/12 11:30	91-20-3		
2-Nitroaniline	ND mg/kg	1.8	0.047	1	06/22/12 09:02	06/26/12 11:30	88-74-4		
3-Nitroaniline	ND mg/kg	1.8	0.067	1	06/22/12 09:02	06/26/12 11:30	99-09-2		
4-Nitroaniline	ND mg/kg	1.8	0.35	1	06/22/12 09:02	06/26/12 11:30	100-01-6		
Nitrobenzene	ND mg/kg	0.34	0.069	1	06/22/12 09:02	06/26/12 11:30	98-95-3		
2-Nitrophenol	ND mg/kg	0.34	0.057	1	06/22/12 09:02	06/26/12 11:30	88-75-5		
4-Nitrophenol	ND mg/kg	1.8	0.88	1	06/22/12 09:02	06/26/12 11:30	100-02-7		
N-Nitroso-di-n-propylamine	ND mg/kg	0.34	0.053	1	06/22/12 09:02	06/26/12 11:30	621-64-7		
N-Nitrosodiphenylamine	ND mg/kg	0.34	0.050	1	06/22/12 09:02	06/26/12 11:30	86-30-6		
Pentachlorophenol	ND mg/kg	0.69	0.35	1	06/22/12 09:02	06/26/12 11:30	87-86-5		
Phenanthrone	ND mg/kg	0.34	0.046	1	06/22/12 09:02	06/26/12 11:30	85-01-8		
Phenol	ND mg/kg	0.34	0.062	1	06/22/12 09:02	06/26/12 11:30	108-95-2		
Pyrene	ND mg/kg	0.34	0.048	1	06/22/12 09:02	06/26/12 11:30	129-00-0		
1,2,4-Trichlorobenzene	ND mg/kg	0.34	0.071	1	06/22/12 09:02	06/26/12 11:30	120-82-1		
2,4,5-Trichlorophenol	ND mg/kg	1.8	0.059	1	06/22/12 09:02	06/26/12 11:30	95-95-4		
2,4,6-Trichlorophenol	ND mg/kg	0.34	0.051	1	06/22/12 09:02	06/26/12 11:30	88-06-2		
Surrogates									
Nitrobenzene-d5 (S)	80 %	30-141		1	06/22/12 09:02	06/26/12 11:30	4165-60-0		
2-Fluorobiphenyl (S)	75 %	30-145		1	06/22/12 09:02	06/26/12 11:30	321-60-8		
Terphenyl-d14 (S)	92 %	30-150		1	06/22/12 09:02	06/26/12 11:30	1718-51-0		
Phenol-d6 (S)	73 %	30-142		1	06/22/12 09:02	06/26/12 11:30	13127-88-3		
2-Fluorophenol (S)	72 %	30-137		1	06/22/12 09:02	06/26/12 11:30	367-12-4		
2,4,6-Tribromophenol (S)	88 %	30-150		1	06/22/12 09:02	06/26/12 11:30	118-79-6		
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND mg/kg	1.3	0.65	1	06/21/12 08:43	06/22/12 09:32	67-64-1		
Allyl chloride	ND mg/kg	0.21	0.015	1	06/21/12 08:43	06/22/12 09:32	107-05-1		
Benzene	ND mg/kg	0.021	0.0049	1	06/21/12 08:43	06/22/12 09:32	71-43-2		
Bromobenzene	ND mg/kg	0.052	0.0052	1	06/21/12 08:43	06/22/12 09:32	108-86-1		
Bromochloromethane	ND mg/kg	0.052	0.0089	1	06/21/12 08:43	06/22/12 09:32	74-97-5		
Bromodichloromethane	ND mg/kg	0.052	0.0082	1	06/21/12 08:43	06/22/12 09:32	75-27-4		
Bromoform	ND mg/kg	0.21	0.0096	1	06/21/12 08:43	06/22/12 09:32	75-25-2		
Bromomethane	ND mg/kg	0.52	0.022	1	06/21/12 08:43	06/22/12 09:32	74-83-9		
2-Butanone (MEK)	ND mg/kg	0.52	0.26	1	06/21/12 08:43	06/22/12 09:32	78-93-3		
n-Butylbenzene	ND mg/kg	0.052	0.0068	1	06/21/12 08:43	06/22/12 09:32	104-51-8		
sec-Butylbenzene	ND mg/kg	0.052	0.0043	1	06/21/12 08:43	06/22/12 09:32	135-98-8		
tert-Butylbenzene	ND mg/kg	0.052	0.0054	1	06/21/12 08:43	06/22/12 09:32	98-06-6		
Carbon tetrachloride	ND mg/kg	0.052	0.0099	1	06/21/12 08:43	06/22/12 09:32	56-23-5		
Chlorobenzene	ND mg/kg	0.052	0.0059	1	06/21/12 08:43	06/22/12 09:32	108-90-7		
Chloroethane	ND mg/kg	0.52	0.024	1	06/21/12 08:43	06/22/12 09:32	75-00-3		
Chloroform	ND mg/kg	0.052	0.0039	1	06/21/12 08:43	06/22/12 09:32	67-66-3		
Chloromethane	ND mg/kg	0.21	0.0068	1	06/21/12 08:43	06/22/12 09:32	74-87-3		
2-Chlorotoluene	ND mg/kg	0.052	0.0069	1	06/21/12 08:43	06/22/12 09:32	95-49-8		
4-Chlorotoluene	ND mg/kg	0.052	0.0066	1	06/21/12 08:43	06/22/12 09:32	106-43-4		
1,2-Dibromo-3-chloropropane	ND mg/kg	0.21	0.024	1	06/21/12 08:43	06/22/12 09:32	96-12-8		L3

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-03-07 Lab ID: 10196172004 Collected: 06/18/12 10:45 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Dibromochloromethane	ND mg/kg		0.052	0.0043	1	06/21/12 08:43	06/22/12 09:32	124-48-1	
1,2-Dibromoethane (EDB)	ND mg/kg		0.052	0.0060	1	06/21/12 08:43	06/22/12 09:32	106-93-4	
Dibromomethane	ND mg/kg		0.052	0.0097	1	06/21/12 08:43	06/22/12 09:32	74-95-3	
1,2-Dichlorobenzene	ND mg/kg		0.052	0.0060	1	06/21/12 08:43	06/22/12 09:32	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		0.052	0.0042	1	06/21/12 08:43	06/22/12 09:32	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		0.052	0.0058	1	06/21/12 08:43	06/22/12 09:32	106-46-7	
Dichlorodifluoromethane	ND mg/kg		0.052	0.012	1	06/21/12 08:43	06/22/12 09:32	75-71-8	
1,1-Dichloroethane	ND mg/kg		0.052	0.026	1	06/21/12 08:43	06/22/12 09:32	75-34-3	
1,2-Dichloroethane	ND mg/kg		0.052	0.0067	1	06/21/12 08:43	06/22/12 09:32	107-06-2	
1,1-Dichloroethene	ND mg/kg		0.052	0.0076	1	06/21/12 08:43	06/22/12 09:32	75-35-4	
cis-1,2-Dichloroethene	ND mg/kg		0.052	0.0089	1	06/21/12 08:43	06/22/12 09:32	156-59-2	
trans-1,2-Dichloroethene	ND mg/kg		0.052	0.0096	1	06/21/12 08:43	06/22/12 09:32	156-60-5	
Dichlorofluoromethane	ND mg/kg		0.52	0.033	1	06/21/12 08:43	06/22/12 09:32	75-43-4	
1,2-Dichloropropane	ND mg/kg		0.052	0.026	1	06/21/12 08:43	06/22/12 09:32	78-87-5	
1,3-Dichloropropane	ND mg/kg		0.052	0.0064	1	06/21/12 08:43	06/22/12 09:32	142-28-9	
2,2-Dichloropropane	ND mg/kg		0.21	0.0074	1	06/21/12 08:43	06/22/12 09:32	594-20-7	
1,1-Dichloropropene	ND mg/kg		0.052	0.0071	1	06/21/12 08:43	06/22/12 09:32	563-58-6	
cis-1,3-Dichloropropene	ND mg/kg		0.052	0.0080	1	06/21/12 08:43	06/22/12 09:32	10061-01-5	
trans-1,3-Dichloropropene	ND mg/kg		0.052	0.0088	1	06/21/12 08:43	06/22/12 09:32	10061-02-6	
Diethyl ether (Ethyl ether)	ND mg/kg		0.21	0.017	1	06/21/12 08:43	06/22/12 09:32	60-29-7	
Ethylbenzene	ND mg/kg		0.052	0.0043	1	06/21/12 08:43	06/22/12 09:32	100-41-4	
Hexachloro-1,3-butadiene	ND mg/kg		0.26	0.010	1	06/21/12 08:43	06/22/12 09:32	87-68-3	
Isopropylbenzene (Cumene)	ND mg/kg		0.052	0.0063	1	06/21/12 08:43	06/22/12 09:32	98-82-8	
p-Isopropyltoluene	ND mg/kg		0.052	0.0061	1	06/21/12 08:43	06/22/12 09:32	99-87-6	
Methylene Chloride	ND mg/kg		0.21	0.10	1	06/21/12 08:43	06/22/12 09:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND mg/kg		0.52	0.26	1	06/21/12 08:43	06/22/12 09:32	108-10-1	
Methyl-tert-butyl ether	ND mg/kg		0.052	0.0093	1	06/21/12 08:43	06/22/12 09:32	1634-04-4	
Naphthalene	ND mg/kg		0.21	0.0059	1	06/21/12 08:43	06/22/12 09:32	91-20-3	
n-Propylbenzene	ND mg/kg		0.052	0.0052	1	06/21/12 08:43	06/22/12 09:32	103-65-1	
Styrene	ND mg/kg		0.052	0.026	1	06/21/12 08:43	06/22/12 09:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND mg/kg		0.052	0.026	1	06/21/12 08:43	06/22/12 09:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND mg/kg		0.052	0.0096	1	06/21/12 08:43	06/22/12 09:32	79-34-5	
Tetrachloroethene	ND mg/kg		0.052	0.0054	1	06/21/12 08:43	06/22/12 09:32	127-18-4	
Tetrahydrofuran	ND mg/kg		2.1	0.15	1	06/21/12 08:43	06/22/12 09:32	109-99-9	
Toluene	ND mg/kg		0.052	0.0078	1	06/21/12 08:43	06/22/12 09:32	108-88-3	
1,2,3-Trichlorobenzene	ND mg/kg		0.052	0.0078	1	06/21/12 08:43	06/22/12 09:32	87-61-6	
1,2,4-Trichlorobenzene	ND mg/kg		0.052	0.0097	1	06/21/12 08:43	06/22/12 09:32	120-82-1	
1,1,1-Trichloroethane	ND mg/kg		0.052	0.0061	1	06/21/12 08:43	06/22/12 09:32	71-55-6	
1,1,2-Trichloroethane	ND mg/kg		0.052	0.013	1	06/21/12 08:43	06/22/12 09:32	79-00-5	
Trichloroethene	ND mg/kg		0.052	0.0090	1	06/21/12 08:43	06/22/12 09:32	79-01-6	
Trichlorofluoromethane	ND mg/kg		0.21	0.018	1	06/21/12 08:43	06/22/12 09:32	75-69-4	
1,2,3-Trichloropropane	ND mg/kg		0.21	0.014	1	06/21/12 08:43	06/22/12 09:32	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND mg/kg		0.052	0.0089	1	06/21/12 08:43	06/22/12 09:32	76-13-1	
1,2,4-Trimethylbenzene	ND mg/kg		0.052	0.0062	1	06/21/12 08:43	06/22/12 09:32	95-63-6	
1,3,5-Trimethylbenzene	ND mg/kg		0.052	0.0062	1	06/21/12 08:43	06/22/12 09:32	108-67-8	

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-03-07 Lab ID: 10196172004 Collected: 06/18/12 10:45 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	ND	mg/kg	0.021	0.0077	1	06/21/12 08:43	06/22/12 09:32	75-01-4	
Xylene (Total)	ND	mg/kg	0.16	0.017	1	06/21/12 08:43	06/22/12 09:32	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	98 %		55-127		1	06/21/12 08:43	06/22/12 09:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		49-125		1	06/21/12 08:43	06/22/12 09:32	17060-07-0	
Toluene-d8 (S)	97 %		56-131		1	06/21/12 08:43	06/22/12 09:32	2037-26-5	
4-Bromofluorobenzene (S)	97 %		53-128		1	06/21/12 08:43	06/22/12 09:32	460-00-4	

ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-08-04 Lab ID: 10196172005 Collected: 06/18/12 11:40 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB		Analytical Method: EPA 8082 Preparation Method: EPA 3550							
PCB-1016 (Aroclor 1016)	ND mg/kg	0.035	0.013	1	06/21/12 07:28	06/25/12 20:30	12674-11-2		
PCB-1221 (Aroclor 1221)	ND mg/kg	0.035	0.014	1	06/21/12 07:28	06/25/12 20:30	11104-28-2		
PCB-1232 (Aroclor 1232)	ND mg/kg	0.035	0.015	1	06/21/12 07:28	06/25/12 20:30	11141-16-5		
PCB-1242 (Aroclor 1242)	ND mg/kg	0.035	0.0086	1	06/21/12 07:28	06/25/12 20:30	53469-21-9		
PCB-1248 (Aroclor 1248)	ND mg/kg	0.035	0.0075	1	06/21/12 07:28	06/25/12 20:30	12672-29-6		
PCB-1254 (Aroclor 1254)	ND mg/kg	0.035	0.0097	1	06/21/12 07:28	06/25/12 20:30	11097-69-1		
PCB-1260 (Aroclor 1260)	ND mg/kg	0.035	0.013	1	06/21/12 07:28	06/25/12 20:30	11096-82-5		
PCB-1262 (Aroclor 1262)	ND mg/kg	0.035	0.0043	1	06/21/12 07:28	06/25/12 20:30	37324-23-5		
PCB-1268 (Aroclor 1268)	ND mg/kg	0.035	0.0064	1	06/21/12 07:28	06/25/12 20:30	11100-14-4		
Surrogates									
Tetrachloro-m-xylene (S)	88 %	30-150		1	06/21/12 07:28	06/25/12 20:30	877-09-8		
Decachlorobiphenyl (S)	94 %	30-150		1	06/21/12 07:28	06/25/12 20:30	2051-24-3		
WIDRO GCS									
Diesel Range Organics	160 mg/kg	88.0	9.7	2	06/21/12 09:36	06/23/12 11:47			T6
Surrogates									
n-Triacontane (S)	129 %	50-150		2	06/21/12 09:36	06/23/12 11:47			P3
WIGRO GCV									
Gasoline Range Organics	ND mg/kg	5.2	0.51	1	06/22/12 14:01	06/24/12 07:14			
Surrogates									
a,a,a-Trifluorotoluene (S)	100 %	80-125		1	06/22/12 14:01	06/24/12 07:14	98-08-8		
6010 MET ICP									
Arsenic	7.5 mg/kg	0.39	0.093	1	06/21/12 13:43	06/22/12 12:42	7440-38-2		
Barium	30.4 mg/kg	0.39	0.016	1	06/21/12 13:43	06/22/12 12:42	7440-39-3		
Cadmium	0.19 mg/kg	0.039	0.016	1	06/21/12 13:43	06/25/12 10:13	7440-43-9		
Chromium	5.2 mg/kg	0.39	0.19	1	06/21/12 13:43	06/22/12 12:42	7440-47-3		
Lead	39.1 mg/kg	0.23	0.039	1	06/21/12 13:43	06/22/12 12:42	7439-92-1		
Selenium	ND mg/kg	0.58	0.13	1	06/21/12 13:43	06/22/12 12:42	7782-49-2		
Silver	ND mg/kg	0.39	0.047	1	06/21/12 13:43	06/22/12 12:42	7440-22-4		
7471 Mercury									
Mercury	ND mg/kg	0.020	0.0060	1	06/21/12 13:29	06/22/12 17:47	7439-97-6		
Dry Weight									
Percent Moisture	6.8 %	0.10	0.10	1			06/21/12 00:00		
8270 MSSV									
Acenaphthene	ND mg/kg	0.71	0.084	2	06/22/12 09:02	06/26/12 14:18	83-32-9		
Acenaphthylene	ND mg/kg	0.71	0.082	2	06/22/12 09:02	06/26/12 14:18	208-96-8		
Anthracene	0.85 mg/kg	0.71	0.091	2	06/22/12 09:02	06/26/12 14:18	120-12-7		
Benzidine	ND mg/kg	3.4	1.7	2	06/22/12 09:02	06/26/12 14:18	92-87-5		CL,L2, SS
Benzo(a)anthracene	4.4 mg/kg	0.71	0.10	2	06/22/12 09:02	06/26/12 14:18	56-55-3		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-08-04 Lab ID: 10196172005 Collected: 06/18/12 11:40 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Benzo(a)pyrene	5.9 mg/kg		0.71	0.10	2	06/22/12 09:02	06/26/12 14:18	50-32-8	
Benzo(b)fluoranthene	7.8 mg/kg		0.71	0.10	2	06/22/12 09:02	06/26/12 14:18	205-99-2	
Benzo(g,h,i)perylene	4.1 mg/kg		0.71	0.11	2	06/22/12 09:02	06/26/12 14:18	191-24-2	
Benzo(k)fluoranthene	3.1 mg/kg		0.71	0.099	2	06/22/12 09:02	06/26/12 14:18	207-08-9	
Benzoic acid	ND mg/kg		3.6	0.98	2	06/22/12 09:02	06/26/12 14:18	65-85-0	
Benzyl alcohol	ND mg/kg		1.4	0.10	2	06/22/12 09:02	06/26/12 14:18	100-51-6	
4-Bromophenylphenyl ether	ND mg/kg		0.71	0.11	2	06/22/12 09:02	06/26/12 14:18	101-55-3	
Butylbenzylphthalate	ND mg/kg		0.71	0.096	2	06/22/12 09:02	06/26/12 14:18	85-68-7	
4-Chloro-3-methylphenol	ND mg/kg		0.71	0.083	2	06/22/12 09:02	06/26/12 14:18	59-50-7	
4-Chloroaniline	ND mg/kg		0.71	0.35	2	06/22/12 09:02	06/26/12 14:18	106-47-8	
bis(2-Chloroethoxy)methane	ND mg/kg		0.71	0.12	2	06/22/12 09:02	06/26/12 14:18	111-91-1	
bis(2-Chloroethyl) ether	ND mg/kg		0.71	0.15	2	06/22/12 09:02	06/26/12 14:18	111-44-4	
bis(2-Chloroisopropyl) ether	ND mg/kg		0.71	0.17	2	06/22/12 09:02	06/26/12 14:18	108-60-1	
2-Chloronaphthalene	ND mg/kg		0.71	0.085	2	06/22/12 09:02	06/26/12 14:18	91-58-7	
2-Chlorophenol	ND mg/kg		0.71	0.16	2	06/22/12 09:02	06/26/12 14:18	95-57-8	
4-Chlorophenylphenyl ether	ND mg/kg		0.71	0.095	2	06/22/12 09:02	06/26/12 14:18	7005-72-3	
Chrysene	5.0 mg/kg		0.71	0.10	2	06/22/12 09:02	06/26/12 14:18	218-01-9	
Dibenz(a,h)anthracene	1.3 mg/kg		0.71	0.11	2	06/22/12 09:02	06/26/12 14:18	53-70-3	
Dibenzo furan	ND mg/kg		0.71	0.086	2	06/22/12 09:02	06/26/12 14:18	132-64-9	
1,2-Dichlorobenzene	ND mg/kg		0.71	0.15	2	06/22/12 09:02	06/26/12 14:18	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		0.71	0.16	2	06/22/12 09:02	06/26/12 14:18	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		0.71	0.15	2	06/22/12 09:02	06/26/12 14:18	106-46-7	
3,3'-Dichlorobenzidine	ND mg/kg		1.4	0.72	2	06/22/12 09:02	06/26/12 14:18	91-94-1	
2,4-Dichlorophenol	ND mg/kg		0.71	0.11	2	06/22/12 09:02	06/26/12 14:18	120-83-2	
Diethylphthalate	ND mg/kg		0.71	0.093	2	06/22/12 09:02	06/26/12 14:18	84-66-2	
2,4-Dimethylphenol	ND mg/kg		0.71	0.35	2	06/22/12 09:02	06/26/12 14:18	105-67-9	
Dimethylphthalate	ND mg/kg		0.71	0.099	2	06/22/12 09:02	06/26/12 14:18	131-11-3	
Di-n-butylphthalate	ND mg/kg		0.71	0.073	2	06/22/12 09:02	06/26/12 14:18	84-74-2	
4,6-Dinitro-2-methylphenol	ND mg/kg		3.6	0.60	2	06/22/12 09:02	06/26/12 14:18	534-52-1	
2,4-Dinitrophenol	ND mg/kg		3.6	0.10	2	06/22/12 09:02	06/26/12 14:18	51-28-5	
2,4-Dinitrotoluene	ND mg/kg		0.71	0.12	2	06/22/12 09:02	06/26/12 14:18	121-14-2	
2,6-Dinitrotoluene	ND mg/kg		0.71	0.099	2	06/22/12 09:02	06/26/12 14:18	606-20-2	
Di-n-octylphthalate	ND mg/kg		0.71	0.10	2	06/22/12 09:02	06/26/12 14:18	117-84-0	
bis(2-Ethylhexyl)phthalate	ND mg/kg		0.71	0.17	2	06/22/12 09:02	06/26/12 14:18	117-81-7	
Fluoranthene	3.9 mg/kg		0.71	0.087	2	06/22/12 09:02	06/26/12 14:18	206-44-0	
Fluorene	ND mg/kg		0.71	0.091	2	06/22/12 09:02	06/26/12 14:18	86-73-7	
Hexachloro-1,3-butadiene	ND mg/kg		0.71	0.18	2	06/22/12 09:02	06/26/12 14:18	87-68-3	
Hexachlorobenzene	ND mg/kg		0.71	0.10	2	06/22/12 09:02	06/26/12 14:18	118-74-1	
Hexachlorocyclopentadiene	ND mg/kg		3.6	1.8	2	06/22/12 09:02	06/26/12 14:18	77-47-4	
Hexachloroethane	ND mg/kg		0.71	0.17	2	06/22/12 09:02	06/26/12 14:18	67-72-1	
Indeno(1,2,3-cd)pyrene	3.7 mg/kg		0.71	0.10	2	06/22/12 09:02	06/26/12 14:18	193-39-5	
Isophorone	ND mg/kg		0.71	0.085	2	06/22/12 09:02	06/26/12 14:18	78-59-1	
2-Methylnaphthalene	ND mg/kg		0.71	0.10	2	06/22/12 09:02	06/26/12 14:18	91-57-6	
2-Methylphenol(o-Cresol)	ND mg/kg		0.71	0.11	2	06/22/12 09:02	06/26/12 14:18	95-48-7	
3&4-Methylphenol	ND mg/kg		1.4	0.095	2	06/22/12 09:02	06/26/12 14:18		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-08-04 Lab ID: 10196172005 Collected: 06/18/12 11:40 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Naphthalene	ND mg/kg		0.71	0.14	2	06/22/12 09:02	06/26/12 14:18	91-20-3	
2-Nitroaniline	ND mg/kg		3.6	0.098	2	06/22/12 09:02	06/26/12 14:18	88-74-4	
3-Nitroaniline	ND mg/kg		3.6	0.14	2	06/22/12 09:02	06/26/12 14:18	99-09-2	
4-Nitroaniline	ND mg/kg		3.6	0.73	2	06/22/12 09:02	06/26/12 14:18	100-01-6	
Nitrobenzene	ND mg/kg		0.71	0.14	2	06/22/12 09:02	06/26/12 14:18	98-95-3	
2-Nitrophenol	ND mg/kg		0.71	0.12	2	06/22/12 09:02	06/26/12 14:18	88-75-5	
4-Nitrophenol	ND mg/kg		3.6	1.8	2	06/22/12 09:02	06/26/12 14:18	100-02-7	
N-Nitroso-di-n-propylamine	ND mg/kg		0.71	0.11	2	06/22/12 09:02	06/26/12 14:18	621-64-7	
N-Nitrosodiphenylamine	ND mg/kg		0.71	0.10	2	06/22/12 09:02	06/26/12 14:18	86-30-6	
Pentachlorophenol	ND mg/kg		1.4	0.72	2	06/22/12 09:02	06/26/12 14:18	87-86-5	
Phenanthrene	0.72 mg/kg		0.71	0.095	2	06/22/12 09:02	06/26/12 14:18	85-01-8	
Phenol	ND mg/kg		0.71	0.13	2	06/22/12 09:02	06/26/12 14:18	108-95-2	
Pyrene	4.1 mg/kg		0.71	0.099	2	06/22/12 09:02	06/26/12 14:18	129-00-0	
1,2,4-Trichlorobenzene	ND mg/kg		0.71	0.15	2	06/22/12 09:02	06/26/12 14:18	120-82-1	
2,4,5-Trichlorophenol	ND mg/kg		3.6	0.12	2	06/22/12 09:02	06/26/12 14:18	95-95-4	
2,4,6-Trichlorophenol	ND mg/kg		0.71	0.10	2	06/22/12 09:02	06/26/12 14:18	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	99 %		30-141		2	06/22/12 09:02	06/26/12 14:18	4165-60-0	D4
2-Fluorobiphenyl (S)	94 %		30-145		2	06/22/12 09:02	06/26/12 14:18	321-60-8	
Terphenyl-d14 (S)	95 %		30-150		2	06/22/12 09:02	06/26/12 14:18	1718-51-0	
Phenol-d6 (S)	87 %		30-142		2	06/22/12 09:02	06/26/12 14:18	13127-88-3	
2-Fluorophenol (S)	87 %		30-137		2	06/22/12 09:02	06/26/12 14:18	367-12-4	
2,4,6-Tribromophenol (S)	89 %		30-150		2	06/22/12 09:02	06/26/12 14:18	118-79-6	
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND mg/kg		1.4	0.70	1	06/21/12 08:43	06/22/12 09:53	67-64-1	
Allyl chloride	ND mg/kg		0.22	0.016	1	06/21/12 08:43	06/22/12 09:53	107-05-1	
Benzene	ND mg/kg		0.022	0.0053	1	06/21/12 08:43	06/22/12 09:53	71-43-2	
Bromobenzene	ND mg/kg		0.056	0.0056	1	06/21/12 08:43	06/22/12 09:53	108-86-1	
Bromochloromethane	ND mg/kg		0.056	0.0096	1	06/21/12 08:43	06/22/12 09:53	74-97-5	
Bromodichloromethane	ND mg/kg		0.056	0.0088	1	06/21/12 08:43	06/22/12 09:53	75-27-4	
Bromoform	ND mg/kg		0.22	0.010	1	06/21/12 08:43	06/22/12 09:53	75-25-2	L3
Bromomethane	ND mg/kg		0.56	0.024	1	06/21/12 08:43	06/22/12 09:53	74-83-9	
2-Butanone (MEK)	ND mg/kg		0.56	0.28	1	06/21/12 08:43	06/22/12 09:53	78-93-3	
n-Butylbenzene	ND mg/kg		0.056	0.0073	1	06/21/12 08:43	06/22/12 09:53	104-51-8	
sec-Butylbenzene	ND mg/kg		0.056	0.0047	1	06/21/12 08:43	06/22/12 09:53	135-98-8	
tert-Butylbenzene	ND mg/kg		0.056	0.0058	1	06/21/12 08:43	06/22/12 09:53	98-06-6	
Carbon tetrachloride	ND mg/kg		0.056	0.011	1	06/21/12 08:43	06/22/12 09:53	56-23-5	
Chlorobenzene	ND mg/kg		0.056	0.0064	1	06/21/12 08:43	06/22/12 09:53	108-90-7	
Chloroethane	ND mg/kg		0.56	0.026	1	06/21/12 08:43	06/22/12 09:53	75-00-3	
Chloroform	ND mg/kg		0.056	0.0042	1	06/21/12 08:43	06/22/12 09:53	67-66-3	
Chloromethane	ND mg/kg		0.22	0.0074	1	06/21/12 08:43	06/22/12 09:53	74-87-3	
2-Chlorotoluene	ND mg/kg		0.056	0.0075	1	06/21/12 08:43	06/22/12 09:53	95-49-8	
4-Chlorotoluene	ND mg/kg		0.056	0.0071	1	06/21/12 08:43	06/22/12 09:53	106-43-4	
1,2-Dibromo-3-chloropropane	ND mg/kg		0.22	0.025	1	06/21/12 08:43	06/22/12 09:53	96-12-8	L3

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-08-04 Lab ID: 10196172005 Collected: 06/18/12 11:40 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Dibromochloromethane	ND mg/kg		0.056	0.0047	1	06/21/12 08:43	06/22/12 09:53	124-48-1	
1,2-Dibromoethane (EDB)	ND mg/kg		0.056	0.0065	1	06/21/12 08:43	06/22/12 09:53	106-93-4	
Dibromomethane	ND mg/kg		0.056	0.011	1	06/21/12 08:43	06/22/12 09:53	74-95-3	
1,2-Dichlorobenzene	ND mg/kg		0.056	0.0065	1	06/21/12 08:43	06/22/12 09:53	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		0.056	0.0045	1	06/21/12 08:43	06/22/12 09:53	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		0.056	0.0063	1	06/21/12 08:43	06/22/12 09:53	106-46-7	
Dichlorodifluoromethane	ND mg/kg		0.056	0.013	1	06/21/12 08:43	06/22/12 09:53	75-71-8	
1,1-Dichloroethane	ND mg/kg		0.056	0.028	1	06/21/12 08:43	06/22/12 09:53	75-34-3	
1,2-Dichloroethane	ND mg/kg		0.056	0.0073	1	06/21/12 08:43	06/22/12 09:53	107-06-2	
1,1-Dichloroethene	ND mg/kg		0.056	0.0082	1	06/21/12 08:43	06/22/12 09:53	75-35-4	
cis-1,2-Dichloroethene	ND mg/kg		0.056	0.0096	1	06/21/12 08:43	06/22/12 09:53	156-59-2	
trans-1,2-Dichloroethene	ND mg/kg		0.056	0.010	1	06/21/12 08:43	06/22/12 09:53	156-60-5	
Dichlorofluoromethane	ND mg/kg		0.56	0.036	1	06/21/12 08:43	06/22/12 09:53	75-43-4	
1,2-Dichloropropane	ND mg/kg		0.056	0.028	1	06/21/12 08:43	06/22/12 09:53	78-87-5	
1,3-Dichloropropane	ND mg/kg		0.056	0.0069	1	06/21/12 08:43	06/22/12 09:53	142-28-9	
2,2-Dichloropropane	ND mg/kg		0.22	0.0079	1	06/21/12 08:43	06/22/12 09:53	594-20-7	
1,1-Dichloropropene	ND mg/kg		0.056	0.0077	1	06/21/12 08:43	06/22/12 09:53	563-58-6	
cis-1,3-Dichloropropene	ND mg/kg		0.056	0.0087	1	06/21/12 08:43	06/22/12 09:53	10061-01-5	
trans-1,3-Dichloropropene	ND mg/kg		0.056	0.0094	1	06/21/12 08:43	06/22/12 09:53	10061-02-6	
Diethyl ether (Ethyl ether)	ND mg/kg		0.22	0.018	1	06/21/12 08:43	06/22/12 09:53	60-29-7	
Ethylbenzene	ND mg/kg		0.056	0.0047	1	06/21/12 08:43	06/22/12 09:53	100-41-4	
Hexachloro-1,3-butadiene	ND mg/kg		0.28	0.011	1	06/21/12 08:43	06/22/12 09:53	87-68-3	
Isopropylbenzene (Cumene)	ND mg/kg		0.056	0.0067	1	06/21/12 08:43	06/22/12 09:53	98-82-8	
p-Isopropyltoluene	ND mg/kg		0.056	0.0066	1	06/21/12 08:43	06/22/12 09:53	99-87-6	
Methylene Chloride	ND mg/kg		0.22	0.11	1	06/21/12 08:43	06/22/12 09:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND mg/kg		0.56	0.28	1	06/21/12 08:43	06/22/12 09:53	108-10-1	
Methyl-tert-butyl ether	ND mg/kg		0.056	0.010	1	06/21/12 08:43	06/22/12 09:53	1634-04-4	
Naphthalene	ND mg/kg		0.22	0.0064	1	06/21/12 08:43	06/22/12 09:53	91-20-3	
n-Propylbenzene	ND mg/kg		0.056	0.0056	1	06/21/12 08:43	06/22/12 09:53	103-65-1	
Styrene	ND mg/kg		0.056	0.028	1	06/21/12 08:43	06/22/12 09:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND mg/kg		0.056	0.028	1	06/21/12 08:43	06/22/12 09:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND mg/kg		0.056	0.010	1	06/21/12 08:43	06/22/12 09:53	79-34-5	
Tetrachloroethene	ND mg/kg		0.056	0.0058	1	06/21/12 08:43	06/22/12 09:53	127-18-4	
Tetrahydrofuran	ND mg/kg		2.2	0.16	1	06/21/12 08:43	06/22/12 09:53	109-99-9	
Toluene	ND mg/kg		0.056	0.0084	1	06/21/12 08:43	06/22/12 09:53	108-88-3	
1,2,3-Trichlorobenzene	ND mg/kg		0.056	0.0084	1	06/21/12 08:43	06/22/12 09:53	87-61-6	
1,2,4-Trichlorobenzene	ND mg/kg		0.056	0.011	1	06/21/12 08:43	06/22/12 09:53	120-82-1	
1,1,1-Trichloroethane	ND mg/kg		0.056	0.0066	1	06/21/12 08:43	06/22/12 09:53	71-55-6	
1,1,2-Trichloroethane	ND mg/kg		0.056	0.014	1	06/21/12 08:43	06/22/12 09:53	79-00-5	
Trichloroethene	ND mg/kg		0.056	0.0097	1	06/21/12 08:43	06/22/12 09:53	79-01-6	
Trichlorofluoromethane	ND mg/kg		0.22	0.020	1	06/21/12 08:43	06/22/12 09:53	75-69-4	
1,2,3-Trichloropropane	ND mg/kg		0.22	0.015	1	06/21/12 08:43	06/22/12 09:53	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND mg/kg		0.056	0.0096	1	06/21/12 08:43	06/22/12 09:53	76-13-1	
1,2,4-Trimethylbenzene	ND mg/kg		0.056	0.0067	1	06/21/12 08:43	06/22/12 09:53	95-63-6	
1,3,5-Trimethylbenzene	ND mg/kg		0.056	0.0066	1	06/21/12 08:43	06/22/12 09:53	108-67-8	

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-08-04 Lab ID: 10196172005 Collected: 06/18/12 11:40 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	ND	mg/kg	0.022	0.0083	1	06/21/12 08:43	06/22/12 09:53	75-01-4	
Xylene (Total)	ND	mg/kg	0.17	0.019	1	06/21/12 08:43	06/22/12 09:53	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	105 %		55-127		1	06/21/12 08:43	06/22/12 09:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	107 %		49-125		1	06/21/12 08:43	06/22/12 09:53	17060-07-0	
Toluene-d8 (S)	102 %		56-131		1	06/21/12 08:43	06/22/12 09:53	2037-26-5	
4-Bromofluorobenzene (S)	103 %		53-128		1	06/21/12 08:43	06/22/12 09:53	460-00-4	

ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-08-7.5 Lab ID: 10196172006 Collected: 06/18/12 11:55 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3550								
PCB-1016 (Aroclor 1016)	ND mg/kg	0.38	0.14	10	06/21/12 07:28	06/26/12 15:51	12674-11-2		
PCB-1221 (Aroclor 1221)	ND mg/kg	0.38	0.15	10	06/21/12 07:28	06/26/12 15:51	11104-28-2		
PCB-1232 (Aroclor 1232)	ND mg/kg	0.38	0.16	10	06/21/12 07:28	06/26/12 15:51	11141-16-5		
PCB-1242 (Aroclor 1242)	ND mg/kg	0.38	0.092	10	06/21/12 07:28	06/26/12 15:51	53469-21-9		
PCB-1248 (Aroclor 1248)	ND mg/kg	0.38	0.080	10	06/21/12 07:28	06/26/12 15:51	12672-29-6		
PCB-1254 (Aroclor 1254)	ND mg/kg	0.38	0.10	10	06/21/12 07:28	06/26/12 15:51	11097-69-1		
PCB-1260 (Aroclor 1260)	ND mg/kg	0.38	0.14	10	06/21/12 07:28	06/26/12 15:51	11096-82-5		
PCB-1262 (Aroclor 1262)	ND mg/kg	0.38	0.046	10	06/21/12 07:28	06/26/12 15:51	37324-23-5		
PCB-1268 (Aroclor 1268)	ND mg/kg	0.38	0.069	10	06/21/12 07:28	06/26/12 15:51	11100-14-4		
Surrogates									
Tetrachloro-m-xylene (S)	92 %	30-150		10	06/21/12 07:28	06/26/12 15:51	877-09-8	D3	
Decachlorobiphenyl (S)	96 %	30-150		10	06/21/12 07:28	06/26/12 15:51	2051-24-3		
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	2630 mg/kg	166	18.3	20	06/21/12 09:36	06/23/12 12:10			T6
Surrogates									
n-Triacontane (S)	0 %	50-150		20	06/21/12 09:36	06/23/12 12:10			S4
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Gasoline Range Organics	ND mg/kg	5.8	0.56	1	06/22/12 14:01	06/24/12 07:33			
Surrogates									
a,a,a-Trifluorotoluene (S)	99 %	80-125		1	06/22/12 14:01	06/24/12 07:33	98-08-8		
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	1.5 mg/kg	0.46	0.11	1	06/21/12 13:43	06/22/12 12:48	7440-38-2		
Barium	24.4 mg/kg	0.46	0.018	1	06/21/12 13:43	06/22/12 12:48	7440-39-3		
Cadmium	0.33 mg/kg	0.046	0.018	1	06/21/12 13:43	06/25/12 10:18	7440-43-9		
Chromium	6.2 mg/kg	0.46	0.23	1	06/21/12 13:43	06/22/12 12:48	7440-47-3		
Lead	2.8 mg/kg	0.28	0.046	1	06/21/12 13:43	06/22/12 12:48	7439-92-1		
Selenium	ND mg/kg	0.69	0.16	1	06/21/12 13:43	06/22/12 12:48	7782-49-2		
Silver	ND mg/kg	0.46	0.055	1	06/21/12 13:43	06/22/12 12:48	7440-22-4		
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	ND mg/kg	0.022	0.0067	1	06/21/12 13:29	06/22/12 17:49	7439-97-6		
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	12.8 %	0.10	0.10	1			06/21/12 00:00		
8270 MSSV	Analytical Method: EPA 8270 Preparation Method: EPA 3550								
Acenaphthene	ND mg/kg	0.38	0.045	1	06/22/12 09:02	06/26/12 11:56	83-32-9		
Acenaphthylene	ND mg/kg	0.38	0.044	1	06/22/12 09:02	06/26/12 11:56	208-96-8		
Anthracene	ND mg/kg	0.38	0.049	1	06/22/12 09:02	06/26/12 11:56	120-12-7		
Benzidine	ND mg/kg	1.8	0.92	1	06/22/12 09:02	06/26/12 11:56	92-87-5		CL,L2, SS
Benzo(a)anthracene	0.49 mg/kg	0.38	0.053	1	06/22/12 09:02	06/26/12 11:56	56-55-3		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-08-7.5 Lab ID: 10196172006 Collected: 06/18/12 11:55 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Benzo(a)pyrene	0.44 mg/kg		0.38	0.054	1	06/22/12 09:02	06/26/12 11:56	50-32-8	
Benzo(b)fluoranthene	0.56 mg/kg		0.38	0.054	1	06/22/12 09:02	06/26/12 11:56	205-99-2	
Benzo(g,h,i)perylene	ND mg/kg		0.38	0.058	1	06/22/12 09:02	06/26/12 11:56	191-24-2	
Benzo(k)fluoranthene	ND mg/kg		0.38	0.053	1	06/22/12 09:02	06/26/12 11:56	207-08-9	
Benzoic acid	ND mg/kg		1.9	0.52	1	06/22/12 09:02	06/26/12 11:56	65-85-0	
Benzyl alcohol	ND mg/kg		0.76	0.056	1	06/22/12 09:02	06/26/12 11:56	100-51-6	
4-Bromophenylphenyl ether	ND mg/kg		0.38	0.058	1	06/22/12 09:02	06/26/12 11:56	101-55-3	
Butylbenzylphthalate	ND mg/kg		0.38	0.051	1	06/22/12 09:02	06/26/12 11:56	85-68-7	
4-Chloro-3-methylphenol	ND mg/kg		0.38	0.044	1	06/22/12 09:02	06/26/12 11:56	59-50-7	
4-Chloroaniline	ND mg/kg		0.38	0.19	1	06/22/12 09:02	06/26/12 11:56	106-47-8	
bis(2-Chloroethoxy)methane	ND mg/kg		0.38	0.064	1	06/22/12 09:02	06/26/12 11:56	111-91-1	
bis(2-Chloroethyl) ether	ND mg/kg		0.38	0.077	1	06/22/12 09:02	06/26/12 11:56	111-44-4	
bis(2-Chloroisopropyl) ether	ND mg/kg		0.38	0.090	1	06/22/12 09:02	06/26/12 11:56	108-60-1	
2-Chloronaphthalene	ND mg/kg		0.38	0.046	1	06/22/12 09:02	06/26/12 11:56	91-58-7	
2-Chlorophenol	ND mg/kg		0.38	0.083	1	06/22/12 09:02	06/26/12 11:56	95-57-8	
4-Chlorophenylphenyl ether	ND mg/kg		0.38	0.051	1	06/22/12 09:02	06/26/12 11:56	7005-72-3	
Chrysene	0.50 mg/kg		0.38	0.054	1	06/22/12 09:02	06/26/12 11:56	218-01-9	
Dibenz(a,h)anthracene	ND mg/kg		0.38	0.059	1	06/22/12 09:02	06/26/12 11:56	53-70-3	
Dibenzo furan	ND mg/kg		0.38	0.046	1	06/22/12 09:02	06/26/12 11:56	132-64-9	
1,2-Dichlorobenzene	ND mg/kg		0.38	0.081	1	06/22/12 09:02	06/26/12 11:56	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		0.38	0.087	1	06/22/12 09:02	06/26/12 11:56	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		0.38	0.081	1	06/22/12 09:02	06/26/12 11:56	106-46-7	
3,3'-Dichlorobenzidine	ND mg/kg		0.77	0.38	1	06/22/12 09:02	06/26/12 11:56	91-94-1	
2,4-Dichlorophenol	ND mg/kg		0.38	0.057	1	06/22/12 09:02	06/26/12 11:56	120-83-2	
Diethylphthalate	ND mg/kg		0.38	0.050	1	06/22/12 09:02	06/26/12 11:56	84-66-2	
2,4-Dimethylphenol	ND mg/kg		0.38	0.19	1	06/22/12 09:02	06/26/12 11:56	105-67-9	
Dimethylphthalate	ND mg/kg		0.38	0.053	1	06/22/12 09:02	06/26/12 11:56	131-11-3	
Di-n-butylphthalate	ND mg/kg		0.38	0.039	1	06/22/12 09:02	06/26/12 11:56	84-74-2	
4,6-Dinitro-2-methylphenol	ND mg/kg		1.9	0.32	1	06/22/12 09:02	06/26/12 11:56	534-52-1	
2,4-Dinitrophenol	ND mg/kg		1.9	0.054	1	06/22/12 09:02	06/26/12 11:56	51-28-5	
2,4-Dinitrotoluene	ND mg/kg		0.38	0.063	1	06/22/12 09:02	06/26/12 11:56	121-14-2	
2,6-Dinitrotoluene	ND mg/kg		0.38	0.053	1	06/22/12 09:02	06/26/12 11:56	606-20-2	
Di-n-octylphthalate	ND mg/kg		0.38	0.055	1	06/22/12 09:02	06/26/12 11:56	117-84-0	
bis(2-Ethylhexyl)phthalate	ND mg/kg		0.38	0.089	1	06/22/12 09:02	06/26/12 11:56	117-81-7	
Fluoranthene	0.77 mg/kg		0.38	0.046	1	06/22/12 09:02	06/26/12 11:56	206-44-0	
Fluorene	ND mg/kg		0.38	0.049	1	06/22/12 09:02	06/26/12 11:56	86-73-7	
Hexachloro-1,3-butadiene	ND mg/kg		0.38	0.094	1	06/22/12 09:02	06/26/12 11:56	87-68-3	
Hexachlorobenzene	ND mg/kg		0.38	0.053	1	06/22/12 09:02	06/26/12 11:56	118-74-1	
Hexachlorocyclopentadiene	ND mg/kg		1.9	0.97	1	06/22/12 09:02	06/26/12 11:56	77-47-4	
Hexachloroethane	ND mg/kg		0.38	0.089	1	06/22/12 09:02	06/26/12 11:56	67-72-1	
Indeno(1,2,3-cd)pyrene	ND mg/kg		0.38	0.055	1	06/22/12 09:02	06/26/12 11:56	193-39-5	
Isophorone	ND mg/kg		0.38	0.046	1	06/22/12 09:02	06/26/12 11:56	78-59-1	
2-Methylnaphthalene	ND mg/kg		0.38	0.056	1	06/22/12 09:02	06/26/12 11:56	91-57-6	
2-Methylphenol(o-Cresol)	ND mg/kg		0.38	0.058	1	06/22/12 09:02	06/26/12 11:56	95-48-7	
3&4-Methylphenol	ND mg/kg		0.76	0.051	1	06/22/12 09:02	06/26/12 11:56		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-08-7.5 Lab ID: 10196172006 Collected: 06/18/12 11:55 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Naphthalene	ND mg/kg	0.38	0.074	1	06/22/12 09:02	06/26/12 11:56	91-20-3		
2-Nitroaniline	ND mg/kg	1.9	0.052	1	06/22/12 09:02	06/26/12 11:56	88-74-4		
3-Nitroaniline	ND mg/kg	1.9	0.074	1	06/22/12 09:02	06/26/12 11:56	99-09-2		
4-Nitroaniline	ND mg/kg	1.9	0.39	1	06/22/12 09:02	06/26/12 11:56	100-01-6		
Nitrobenzene	ND mg/kg	0.38	0.076	1	06/22/12 09:02	06/26/12 11:56	98-95-3		
2-Nitrophenol	ND mg/kg	0.38	0.063	1	06/22/12 09:02	06/26/12 11:56	88-75-5		
4-Nitrophenol	ND mg/kg	1.9	0.97	1	06/22/12 09:02	06/26/12 11:56	100-02-7		
N-Nitroso-di-n-propylamine	ND mg/kg	0.38	0.059	1	06/22/12 09:02	06/26/12 11:56	621-64-7		
N-Nitrosodiphenylamine	ND mg/kg	0.38	0.055	1	06/22/12 09:02	06/26/12 11:56	86-30-6		
Pentachlorophenol	ND mg/kg	0.77	0.38	1	06/22/12 09:02	06/26/12 11:56	87-86-5		
Phenanthrene	ND mg/kg	0.38	0.051	1	06/22/12 09:02	06/26/12 11:56	85-01-8		
Phenol	ND mg/kg	0.38	0.069	1	06/22/12 09:02	06/26/12 11:56	108-95-2		
Pyrene	0.75 mg/kg	0.38	0.053	1	06/22/12 09:02	06/26/12 11:56	129-00-0		
1,2,4-Trichlorobenzene	ND mg/kg	0.38	0.078	1	06/22/12 09:02	06/26/12 11:56	120-82-1		
2,4,5-Trichlorophenol	ND mg/kg	1.9	0.065	1	06/22/12 09:02	06/26/12 11:56	95-95-4		
2,4,6-Trichlorophenol	ND mg/kg	0.38	0.056	1	06/22/12 09:02	06/26/12 11:56	88-06-2		
Surrogates									
Nitrobenzene-d5 (S)	81 %	30-141		1	06/22/12 09:02	06/26/12 11:56	4165-60-0		
2-Fluorobiphenyl (S)	84 %	30-145		1	06/22/12 09:02	06/26/12 11:56	321-60-8		
Terphenyl-d14 (S)	91 %	30-150		1	06/22/12 09:02	06/26/12 11:56	1718-51-0		
Phenol-d6 (S)	73 %	30-142		1	06/22/12 09:02	06/26/12 11:56	13127-88-3		
2-Fluorophenol (S)	67 %	30-137		1	06/22/12 09:02	06/26/12 11:56	367-12-4		
2,4,6-Tribromophenol (S)	95 %	30-150		1	06/22/12 09:02	06/26/12 11:56	118-79-6		
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND mg/kg	1.5	0.73	1	06/21/12 08:43	06/22/12 10:15	67-64-1		
Allyl chloride	ND mg/kg	0.23	0.017	1	06/21/12 08:43	06/22/12 10:15	107-05-1		
Benzene	ND mg/kg	0.023	0.0055	1	06/21/12 08:43	06/22/12 10:15	71-43-2		
Bromobenzene	ND mg/kg	0.058	0.0058	1	06/21/12 08:43	06/22/12 10:15	108-86-1		
Bromochloromethane	ND mg/kg	0.058	0.010	1	06/21/12 08:43	06/22/12 10:15	74-97-5		
Bromodichloromethane	ND mg/kg	0.058	0.0092	1	06/21/12 08:43	06/22/12 10:15	75-27-4		
Bromoform	ND mg/kg	0.23	0.011	1	06/21/12 08:43	06/22/12 10:15	75-25-2		
Bromomethane	ND mg/kg	0.58	0.025	1	06/21/12 08:43	06/22/12 10:15	74-83-9		
2-Butanone (MEK)	ND mg/kg	0.58	0.29	1	06/21/12 08:43	06/22/12 10:15	78-93-3		
n-Butylbenzene	ND mg/kg	0.058	0.0076	1	06/21/12 08:43	06/22/12 10:15	104-51-8		
sec-Butylbenzene	ND mg/kg	0.058	0.0049	1	06/21/12 08:43	06/22/12 10:15	135-98-8		
tert-Butylbenzene	ND mg/kg	0.058	0.0060	1	06/21/12 08:43	06/22/12 10:15	98-06-6		
Carbon tetrachloride	ND mg/kg	0.058	0.011	1	06/21/12 08:43	06/22/12 10:15	56-23-5		
Chlorobenzene	ND mg/kg	0.058	0.0066	1	06/21/12 08:43	06/22/12 10:15	108-90-7		
Chloroethane	ND mg/kg	0.58	0.027	1	06/21/12 08:43	06/22/12 10:15	75-00-3		
Chloroform	ND mg/kg	0.058	0.0044	1	06/21/12 08:43	06/22/12 10:15	67-66-3		
Chloromethane	ND mg/kg	0.23	0.0077	1	06/21/12 08:43	06/22/12 10:15	74-87-3		
2-Chlorotoluene	ND mg/kg	0.058	0.0078	1	06/21/12 08:43	06/22/12 10:15	95-49-8		
4-Chlorotoluene	ND mg/kg	0.058	0.0074	1	06/21/12 08:43	06/22/12 10:15	106-43-4		
1,2-Dibromo-3-chloropropane	ND mg/kg	0.23	0.027	1	06/21/12 08:43	06/22/12 10:15	96-12-8		L3

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-08-7.5 Lab ID: 10196172006 Collected: 06/18/12 11:55 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Dibromochloromethane	ND mg/kg		0.058	0.0049	1	06/21/12 08:43	06/22/12 10:15	124-48-1	
1,2-Dibromoethane (EDB)	ND mg/kg		0.058	0.0067	1	06/21/12 08:43	06/22/12 10:15	106-93-4	
Dibromomethane	ND mg/kg		0.058	0.011	1	06/21/12 08:43	06/22/12 10:15	74-95-3	
1,2-Dichlorobenzene	ND mg/kg		0.058	0.0067	1	06/21/12 08:43	06/22/12 10:15	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		0.058	0.0047	1	06/21/12 08:43	06/22/12 10:15	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		0.058	0.0065	1	06/21/12 08:43	06/22/12 10:15	106-46-7	
Dichlorodifluoromethane	ND mg/kg		0.058	0.013	1	06/21/12 08:43	06/22/12 10:15	75-71-8	
1,1-Dichloroethane	ND mg/kg		0.058	0.029	1	06/21/12 08:43	06/22/12 10:15	75-34-3	
1,2-Dichloroethane	ND mg/kg		0.058	0.0076	1	06/21/12 08:43	06/22/12 10:15	107-06-2	
1,1-Dichloroethene	ND mg/kg		0.058	0.0085	1	06/21/12 08:43	06/22/12 10:15	75-35-4	
cis-1,2-Dichloroethene	ND mg/kg		0.058	0.010	1	06/21/12 08:43	06/22/12 10:15	156-59-2	
trans-1,2-Dichloroethene	ND mg/kg		0.058	0.011	1	06/21/12 08:43	06/22/12 10:15	156-60-5	
Dichlorofluoromethane	ND mg/kg		0.58	0.037	1	06/21/12 08:43	06/22/12 10:15	75-43-4	
1,2-Dichloropropane	ND mg/kg		0.058	0.029	1	06/21/12 08:43	06/22/12 10:15	78-87-5	
1,3-Dichloropropane	ND mg/kg		0.058	0.0072	1	06/21/12 08:43	06/22/12 10:15	142-28-9	
2,2-Dichloropropane	ND mg/kg		0.23	0.0083	1	06/21/12 08:43	06/22/12 10:15	594-20-7	
1,1-Dichloropropene	ND mg/kg		0.058	0.0080	1	06/21/12 08:43	06/22/12 10:15	563-58-6	
cis-1,3-Dichloropropene	ND mg/kg		0.058	0.0090	1	06/21/12 08:43	06/22/12 10:15	10061-01-5	
trans-1,3-Dichloropropene	ND mg/kg		0.058	0.0098	1	06/21/12 08:43	06/22/12 10:15	10061-02-6	
Diethyl ether (Ethyl ether)	ND mg/kg		0.23	0.019	1	06/21/12 08:43	06/22/12 10:15	60-29-7	
Ethylbenzene	ND mg/kg		0.058	0.0049	1	06/21/12 08:43	06/22/12 10:15	100-41-4	
Hexachloro-1,3-butadiene	ND mg/kg		0.29	0.012	1	06/21/12 08:43	06/22/12 10:15	87-68-3	
Isopropylbenzene (Cumene)	ND mg/kg		0.058	0.0070	1	06/21/12 08:43	06/22/12 10:15	98-82-8	
p-Isopropyltoluene	ND mg/kg		0.058	0.0069	1	06/21/12 08:43	06/22/12 10:15	99-87-6	
Methylene Chloride	ND mg/kg		0.23	0.12	1	06/21/12 08:43	06/22/12 10:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND mg/kg		0.58	0.29	1	06/21/12 08:43	06/22/12 10:15	108-10-1	
Methyl-tert-butyl ether	ND mg/kg		0.058	0.010	1	06/21/12 08:43	06/22/12 10:15	1634-04-4	
Naphthalene	0.27 mg/kg		0.23	0.0066	1	06/21/12 08:43	06/22/12 10:15	91-20-3	
n-Propylbenzene	ND mg/kg		0.058	0.0059	1	06/21/12 08:43	06/22/12 10:15	103-65-1	
Styrene	ND mg/kg		0.058	0.029	1	06/21/12 08:43	06/22/12 10:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND mg/kg		0.058	0.029	1	06/21/12 08:43	06/22/12 10:15	630-20-6	
1,1,2,2-Tetrachloroethane	ND mg/kg		0.058	0.011	1	06/21/12 08:43	06/22/12 10:15	79-34-5	
Tetrachloroethene	ND mg/kg		0.058	0.0060	1	06/21/12 08:43	06/22/12 10:15	127-18-4	
Tetrahydrofuran	ND mg/kg		2.3	0.16	1	06/21/12 08:43	06/22/12 10:15	109-99-9	
Toluene	ND mg/kg		0.058	0.0088	1	06/21/12 08:43	06/22/12 10:15	108-88-3	
1,2,3-Trichlorobenzene	ND mg/kg		0.058	0.0087	1	06/21/12 08:43	06/22/12 10:15	87-61-6	
1,2,4-Trichlorobenzene	ND mg/kg		0.058	0.011	1	06/21/12 08:43	06/22/12 10:15	120-82-1	
1,1,1-Trichloroethane	ND mg/kg		0.058	0.0069	1	06/21/12 08:43	06/22/12 10:15	71-55-6	
1,1,2-Trichloroethane	ND mg/kg		0.058	0.014	1	06/21/12 08:43	06/22/12 10:15	79-00-5	
Trichloroethene	ND mg/kg		0.058	0.010	1	06/21/12 08:43	06/22/12 10:15	79-01-6	
Trichlorofluoromethane	ND mg/kg		0.23	0.020	1	06/21/12 08:43	06/22/12 10:15	75-69-4	
1,2,3-Trichloropropane	ND mg/kg		0.23	0.015	1	06/21/12 08:43	06/22/12 10:15	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND mg/kg		0.058	0.010	1	06/21/12 08:43	06/22/12 10:15	76-13-1	
1,2,4-Trimethylbenzene	ND mg/kg		0.058	0.0070	1	06/21/12 08:43	06/22/12 10:15	95-63-6	
1,3,5-Trimethylbenzene	ND mg/kg		0.058	0.0069	1	06/21/12 08:43	06/22/12 10:15	108-67-8	

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-08-7.5 Lab ID: 10196172006 Collected: 06/18/12 11:55 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	ND	mg/kg	0.023	0.0086	1	06/21/12 08:43	06/22/12 10:15	75-01-4	
Xylene (Total)	ND	mg/kg	0.17	0.019	1	06/21/12 08:43	06/22/12 10:15	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	97 %		55-127		1	06/21/12 08:43	06/22/12 10:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	97 %		49-125		1	06/21/12 08:43	06/22/12 10:15	17060-07-0	
Toluene-d8 (S)	95 %		56-131		1	06/21/12 08:43	06/22/12 10:15	2037-26-5	
4-Bromofluorobenzene (S)	95 %		53-128		1	06/21/12 08:43	06/22/12 10:15	460-00-4	

ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-01-04 Lab ID: 10196172007 Collected: 06/18/12 13:45 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB		Analytical Method: EPA 8082 Preparation Method: EPA 3550							
PCB-1016 (Aroclor 1016)	ND mg/kg	0.48	0.17	10	06/21/12 07:28	06/26/12 15:08	12674-11-2		
PCB-1221 (Aroclor 1221)	ND mg/kg	0.48	0.19	10	06/21/12 07:28	06/26/12 15:08	11104-28-2		
PCB-1232 (Aroclor 1232)	ND mg/kg	0.48	0.20	10	06/21/12 07:28	06/26/12 15:08	11141-16-5		
PCB-1242 (Aroclor 1242)	ND mg/kg	0.48	0.12	10	06/21/12 07:28	06/26/12 15:08	53469-21-9		
PCB-1248 (Aroclor 1248)	ND mg/kg	0.48	0.10	10	06/21/12 07:28	06/26/12 15:08	12672-29-6		
PCB-1254 (Aroclor 1254)	ND mg/kg	0.48	0.13	10	06/21/12 07:28	06/26/12 15:08	11097-69-1		
PCB-1260 (Aroclor 1260)	ND mg/kg	0.48	0.17	10	06/21/12 07:28	06/26/12 15:08	11096-82-5		
PCB-1262 (Aroclor 1262)	ND mg/kg	0.48	0.058	10	06/21/12 07:28	06/26/12 15:08	37324-23-5		
PCB-1268 (Aroclor 1268)	ND mg/kg	0.48	0.086	10	06/21/12 07:28	06/26/12 15:08	11100-14-4		
Surrogates									
Tetrachloro-m-xylene (S)	123 %	30-150		10	06/21/12 07:28	06/26/12 15:08	877-09-8	D3	
Decachlorobiphenyl (S)	109 %	30-150		10	06/21/12 07:28	06/26/12 15:08	2051-24-3		
WIDRO GCS									
Diesel Range Organics	453 mg/kg	24.3	2.7	2	06/21/12 09:36	06/22/12 18:07			T6
Surrogates									
n-Triacontane (S)	81 %	50-150		2	06/21/12 09:36	06/22/12 18:07			
WIGRO GCV									
Gasoline Range Organics	46.9 mg/kg	7.1	0.70	1	06/22/12 14:01	06/24/12 07:53			
Surrogates									
a,a,a-Trifluorotoluene (S)	98 %	80-125		1	06/22/12 14:01	06/24/12 07:53	98-08-8		
6010 MET ICP									
Arsenic	3.4 mg/kg	0.49	0.12	1	06/21/12 13:43	06/22/12 12:53	7440-38-2		
Barium	19.7 mg/kg	0.49	0.019	1	06/21/12 13:43	06/22/12 12:53	7440-39-3		
Cadmium	ND mg/kg	0.049	0.019	1	06/21/12 13:43	06/22/12 12:53	7440-43-9		
Chromium	4.5 mg/kg	0.49	0.24	1	06/21/12 13:43	06/22/12 12:53	7440-47-3		
Lead	4.6 mg/kg	0.29	0.049	1	06/21/12 13:43	06/22/12 12:53	7439-92-1		
Selenium	ND mg/kg	0.73	0.16	1	06/21/12 13:43	06/22/12 12:53	7782-49-2		
Silver	ND mg/kg	0.49	0.058	1	06/21/12 13:43	06/22/12 12:53	7440-22-4		
7471 Mercury									
Mercury	ND mg/kg	0.028	0.0084	1	06/21/12 13:29	06/22/12 17:55	7439-97-6		
Dry Weight									
Percent Moisture	30.8 %	0.10	0.10	1		06/21/12 00:00			
8270 MSSV									
Acenaphthene	ND mg/kg	23.9	2.8	50	06/22/12 09:02	06/26/12 13:40	83-32-9		
Acenaphthylene	ND mg/kg	23.9	2.8	50	06/22/12 09:02	06/26/12 13:40	208-96-8		
Anthracene	33.5 mg/kg	23.9	3.1	50	06/22/12 09:02	06/26/12 13:40	120-12-7		
Benzidine	ND mg/kg	116	57.8	50	06/22/12 09:02	06/26/12 13:40	92-87-5		CL,L2, SS
Benzo(a)anthracene	79.8 mg/kg	23.9	3.4	50	06/22/12 09:02	06/26/12 13:40	56-55-3		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-01-04 Lab ID: 10196172007 Collected: 06/18/12 13:45 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Benzo(a)pyrene	70.8 mg/kg		23.9	3.4	50	06/22/12 09:02	06/26/12 13:40	50-32-8	
Benzo(b)fluoranthene	86.7 mg/kg		23.9	3.4	50	06/22/12 09:02	06/26/12 13:40	205-99-2	
Benzo(g,h,i)perylene	42.7 mg/kg		23.9	3.6	50	06/22/12 09:02	06/26/12 13:40	191-24-2	
Benzo(k)fluoranthene	41.7 mg/kg		23.9	3.3	50	06/22/12 09:02	06/26/12 13:40	207-08-9	
Benzoic acid	ND mg/kg		123	33.1	50	06/22/12 09:02	06/26/12 13:40	65-85-0	
Benzyl alcohol	ND mg/kg		47.7	3.5	50	06/22/12 09:02	06/26/12 13:40	100-51-6	
4-Bromophenylphenyl ether	ND mg/kg		23.9	3.6	50	06/22/12 09:02	06/26/12 13:40	101-55-3	
Butylbenzylphthalate	ND mg/kg		23.9	3.2	50	06/22/12 09:02	06/26/12 13:40	85-68-7	
4-Chloro-3-methylphenol	ND mg/kg		23.9	2.8	50	06/22/12 09:02	06/26/12 13:40	59-50-7	
4-Chloroaniline	ND mg/kg		23.9	11.9	50	06/22/12 09:02	06/26/12 13:40	106-47-8	
bis(2-Chloroethoxy)methane	ND mg/kg		23.9	4.0	50	06/22/12 09:02	06/26/12 13:40	111-91-1	
bis(2-Chloroethyl) ether	ND mg/kg		23.9	4.9	50	06/22/12 09:02	06/26/12 13:40	111-44-4	
bis(2-Chloroisopropyl) ether	ND mg/kg		23.9	5.7	50	06/22/12 09:02	06/26/12 13:40	108-60-1	
2-Chloronaphthalene	ND mg/kg		23.9	2.9	50	06/22/12 09:02	06/26/12 13:40	91-58-7	
2-Chlorophenol	ND mg/kg		23.9	5.2	50	06/22/12 09:02	06/26/12 13:40	95-57-8	
4-Chlorophenylphenyl ether	ND mg/kg		23.9	3.2	50	06/22/12 09:02	06/26/12 13:40	7005-72-3	
Chrysene	86.0 mg/kg		23.9	3.4	50	06/22/12 09:02	06/26/12 13:40	218-01-9	
Dibenz(a,h)anthracene	ND mg/kg		23.9	3.7	50	06/22/12 09:02	06/26/12 13:40	53-70-3	
Dibenzo furan	ND mg/kg		23.9	2.9	50	06/22/12 09:02	06/26/12 13:40	132-64-9	
1,2-Dichlorobenzene	ND mg/kg		23.9	5.1	50	06/22/12 09:02	06/26/12 13:40	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		23.9	5.5	50	06/22/12 09:02	06/26/12 13:40	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		23.9	5.1	50	06/22/12 09:02	06/26/12 13:40	106-46-7	
3,3'-Dichlorobenzidine	ND mg/kg		48.4	24.2	50	06/22/12 09:02	06/26/12 13:40	91-94-1	
2,4-Dichlorophenol	ND mg/kg		23.9	3.6	50	06/22/12 09:02	06/26/12 13:40	120-83-2	
Diethylphthalate	ND mg/kg		23.9	3.1	50	06/22/12 09:02	06/26/12 13:40	84-66-2	
2,4-Dimethylphenol	ND mg/kg		23.9	11.9	50	06/22/12 09:02	06/26/12 13:40	105-67-9	
Dimethylphthalate	ND mg/kg		23.9	3.3	50	06/22/12 09:02	06/26/12 13:40	131-11-3	
Di-n-butylphthalate	ND mg/kg		23.9	2.5	50	06/22/12 09:02	06/26/12 13:40	84-74-2	
4,6-Dinitro-2-methylphenol	ND mg/kg		123	20.1	50	06/22/12 09:02	06/26/12 13:40	534-52-1	
2,4-Dinitrophenol	ND mg/kg		123	3.4	50	06/22/12 09:02	06/26/12 13:40	51-28-5	
2,4-Dinitrotoluene	ND mg/kg		23.9	4.0	50	06/22/12 09:02	06/26/12 13:40	121-14-2	
2,6-Dinitrotoluene	ND mg/kg		23.9	3.3	50	06/22/12 09:02	06/26/12 13:40	606-20-2	
Di-n-octylphthalate	ND mg/kg		23.9	3.5	50	06/22/12 09:02	06/26/12 13:40	117-84-0	
bis(2-Ethylhexyl)phthalate	ND mg/kg		23.9	5.6	50	06/22/12 09:02	06/26/12 13:40	117-81-7	
Fluoranthene	174 mg/kg		23.9	2.9	50	06/22/12 09:02	06/26/12 13:40	206-44-0	
Fluorene	ND mg/kg		23.9	3.1	50	06/22/12 09:02	06/26/12 13:40	86-73-7	
Hexachloro-1,3-butadiene	ND mg/kg		23.9	5.9	50	06/22/12 09:02	06/26/12 13:40	87-68-3	
Hexachlorobenzene	ND mg/kg		23.9	3.4	50	06/22/12 09:02	06/26/12 13:40	118-74-1	
Hexachlorocyclopentadiene	ND mg/kg		123	61.5	50	06/22/12 09:02	06/26/12 13:40	77-47-4	
Hexachloroethane	ND mg/kg		23.9	5.6	50	06/22/12 09:02	06/26/12 13:40	67-72-1	
Indeno(1,2,3-cd)pyrene	39.1 mg/kg		23.9	3.5	50	06/22/12 09:02	06/26/12 13:40	193-39-5	
Isophorone	ND mg/kg		23.9	2.9	50	06/22/12 09:02	06/26/12 13:40	78-59-1	
2-Methylnaphthalene	ND mg/kg		23.9	3.5	50	06/22/12 09:02	06/26/12 13:40	91-57-6	
2-Methylphenol(o-Cresol)	ND mg/kg		23.9	3.7	50	06/22/12 09:02	06/26/12 13:40	95-48-7	
3&4-Methylphenol	ND mg/kg		47.7	3.2	50	06/22/12 09:02	06/26/12 13:40		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-01-04 Lab ID: 10196172007 Collected: 06/18/12 13:45 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Naphthalene	ND mg/kg		23.9	4.6	50	06/22/12 09:02	06/26/12 13:40	91-20-3	
2-Nitroaniline	ND mg/kg		123	3.3	50	06/22/12 09:02	06/26/12 13:40	88-74-4	
3-Nitroaniline	ND mg/kg		123	4.7	50	06/22/12 09:02	06/26/12 13:40	99-09-2	
4-Nitroaniline	ND mg/kg		123	24.7	50	06/22/12 09:02	06/26/12 13:40	100-01-6	
Nitrobenzene	ND mg/kg		23.9	4.8	50	06/22/12 09:02	06/26/12 13:40	98-95-3	
2-Nitrophenol	ND mg/kg		23.9	4.0	50	06/22/12 09:02	06/26/12 13:40	88-75-5	
4-Nitrophenol	ND mg/kg		123	61.5	50	06/22/12 09:02	06/26/12 13:40	100-02-7	
N-Nitroso-di-n-propylamine	ND mg/kg		23.9	3.7	50	06/22/12 09:02	06/26/12 13:40	621-64-7	
N-Nitrosodiphenylamine	ND mg/kg		23.9	3.5	50	06/22/12 09:02	06/26/12 13:40	86-30-6	
Pentachlorophenol	ND mg/kg		48.4	24.2	50	06/22/12 09:02	06/26/12 13:40	87-86-5	
Phenanthrene	114 mg/kg		23.9	3.2	50	06/22/12 09:02	06/26/12 13:40	85-01-8	
Phenol	ND mg/kg		23.9	4.3	50	06/22/12 09:02	06/26/12 13:40	108-95-2	
Pyrene	158 mg/kg		23.9	3.3	50	06/22/12 09:02	06/26/12 13:40	129-00-0	
1,2,4-Trichlorobenzene	ND mg/kg		23.9	4.9	50	06/22/12 09:02	06/26/12 13:40	120-82-1	
2,4,5-Trichlorophenol	ND mg/kg		123	4.1	50	06/22/12 09:02	06/26/12 13:40	95-95-4	
2,4,6-Trichlorophenol	ND mg/kg		23.9	3.5	50	06/22/12 09:02	06/26/12 13:40	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	0 %		30-141		50	06/22/12 09:02	06/26/12 13:40	4165-60-0	D4,S4
2-Fluorobiphenyl (S)	0 %		30-145		50	06/22/12 09:02	06/26/12 13:40	321-60-8	S4
Terphenyl-d14 (S)	0 %		30-150		50	06/22/12 09:02	06/26/12 13:40	1718-51-0	S4
Phenol-d6 (S)	0 %		30-142		50	06/22/12 09:02	06/26/12 13:40	13127-88-3	S4
2-Fluorophenol (S)	0 %		30-137		50	06/22/12 09:02	06/26/12 13:40	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		30-150		50	06/22/12 09:02	06/26/12 13:40	118-79-6	S4
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND mg/kg		18.5	9.3	10	06/21/12 08:43	06/23/12 21:51	67-64-1	
Allyl chloride	ND mg/kg		3.0	0.22	10	06/21/12 08:43	06/23/12 21:51	107-05-1	
Benzene	0.94 mg/kg		0.30	0.070	10	06/21/12 08:43	06/23/12 21:51	71-43-2	
Bromobenzene	ND mg/kg		0.74	0.074	10	06/21/12 08:43	06/23/12 21:51	108-86-1	
Bromochloromethane	ND mg/kg		0.74	0.13	10	06/21/12 08:43	06/23/12 21:51	74-97-5	
Bromodichloromethane	ND mg/kg		0.74	0.12	10	06/21/12 08:43	06/23/12 21:51	75-27-4	
Bromoform	ND mg/kg		3.0	0.14	10	06/21/12 08:43	06/23/12 21:51	75-25-2	
Bromomethane	ND mg/kg		7.4	0.32	10	06/21/12 08:43	06/23/12 21:51	74-83-9	
2-Butanone (MEK)	ND mg/kg		7.4	3.7	10	06/21/12 08:43	06/23/12 21:51	78-93-3	
n-Butylbenzene	ND mg/kg		0.74	0.097	10	06/21/12 08:43	06/23/12 21:51	104-51-8	
sec-Butylbenzene	ND mg/kg		0.74	0.062	10	06/21/12 08:43	06/23/12 21:51	135-98-8	
tert-Butylbenzene	ND mg/kg		0.74	0.077	10	06/21/12 08:43	06/23/12 21:51	98-06-6	
Carbon tetrachloride	ND mg/kg		0.74	0.14	10	06/21/12 08:43	06/23/12 21:51	56-23-5	
Chlorobenzene	ND mg/kg		0.74	0.084	10	06/21/12 08:43	06/23/12 21:51	108-90-7	
Chloroethane	ND mg/kg		7.4	0.34	10	06/21/12 08:43	06/23/12 21:51	75-00-3	
Chloroform	ND mg/kg		0.74	0.056	10	06/21/12 08:43	06/23/12 21:51	67-66-3	
Chloromethane	ND mg/kg		3.0	0.098	10	06/21/12 08:43	06/23/12 21:51	74-87-3	
2-Chlorotoluene	ND mg/kg		0.74	0.099	10	06/21/12 08:43	06/23/12 21:51	95-49-8	
4-Chlorotoluene	ND mg/kg		0.74	0.094	10	06/21/12 08:43	06/23/12 21:51	106-43-4	
1,2-Dibromo-3-chloropropane	ND mg/kg		3.0	0.34	10	06/21/12 08:43	06/23/12 21:51	96-12-8	L3

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-01-04 Lab ID: 10196172007 Collected: 06/18/12 13:45 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Dibromochloromethane	ND mg/kg	0.74	0.062	10	06/21/12 08:43	06/23/12 21:51	124-48-1		
1,2-Dibromoethane (EDB)	ND mg/kg	0.74	0.086	10	06/21/12 08:43	06/23/12 21:51	106-93-4		
Dibromomethane	ND mg/kg	0.74	0.14	10	06/21/12 08:43	06/23/12 21:51	74-95-3		
1,2-Dichlorobenzene	ND mg/kg	0.74	0.086	10	06/21/12 08:43	06/23/12 21:51	95-50-1		
1,3-Dichlorobenzene	ND mg/kg	0.74	0.060	10	06/21/12 08:43	06/23/12 21:51	541-73-1		
1,4-Dichlorobenzene	ND mg/kg	0.74	0.083	10	06/21/12 08:43	06/23/12 21:51	106-46-7		
Dichlorodifluoromethane	ND mg/kg	0.74	0.17	10	06/21/12 08:43	06/23/12 21:51	75-71-8		
1,1-Dichloroethane	ND mg/kg	0.74	0.37	10	06/21/12 08:43	06/23/12 21:51	75-34-3		
1,2-Dichloroethane	ND mg/kg	0.74	0.096	10	06/21/12 08:43	06/23/12 21:51	107-06-2		
1,1-Dichloroethene	ND mg/kg	0.74	0.11	10	06/21/12 08:43	06/23/12 21:51	75-35-4		
cis-1,2-Dichloroethene	ND mg/kg	0.74	0.13	10	06/21/12 08:43	06/23/12 21:51	156-59-2		
trans-1,2-Dichloroethene	ND mg/kg	0.74	0.14	10	06/21/12 08:43	06/23/12 21:51	156-60-5		
Dichlorofluoromethane	ND mg/kg	7.4	0.48	10	06/21/12 08:43	06/23/12 21:51	75-43-4		
1,2-Dichloropropane	ND mg/kg	0.74	0.37	10	06/21/12 08:43	06/23/12 21:51	78-87-5		
1,3-Dichloropropane	ND mg/kg	0.74	0.091	10	06/21/12 08:43	06/23/12 21:51	142-28-9		
2,2-Dichloropropane	ND mg/kg	3.0	0.11	10	06/21/12 08:43	06/23/12 21:51	594-20-7		
1,1-Dichloropropene	ND mg/kg	0.74	0.10	10	06/21/12 08:43	06/23/12 21:51	563-58-6		
cis-1,3-Dichloropropene	ND mg/kg	0.74	0.11	10	06/21/12 08:43	06/23/12 21:51	10061-01-5		
trans-1,3-Dichloropropene	ND mg/kg	0.74	0.13	10	06/21/12 08:43	06/23/12 21:51	10061-02-6		
Diethyl ether (Ethyl ether)	ND mg/kg	3.0	0.24	10	06/21/12 08:43	06/23/12 21:51	60-29-7		
Ethylbenzene	ND mg/kg	0.74	0.062	10	06/21/12 08:43	06/23/12 21:51	100-41-4		
Hexachloro-1,3-butadiene	ND mg/kg	3.7	0.15	10	06/21/12 08:43	06/23/12 21:51	87-68-3		
Isopropylbenzene (Cumene)	ND mg/kg	0.74	0.089	10	06/21/12 08:43	06/23/12 21:51	98-82-8		
p-Isopropyltoluene	ND mg/kg	0.74	0.088	10	06/21/12 08:43	06/23/12 21:51	99-87-6		
Methylene Chloride	ND mg/kg	3.0	1.5	10	06/21/12 08:43	06/23/12 21:51	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND mg/kg	7.4	3.7	10	06/21/12 08:43	06/23/12 21:51	108-10-1		
Methyl-tert-butyl ether	ND mg/kg	0.74	0.13	10	06/21/12 08:43	06/23/12 21:51	1634-04-4		
Naphthalene	113 mg/kg	3.0	0.084	10	06/21/12 08:43	06/23/12 21:51	91-20-3		
n-Propylbenzene	ND mg/kg	0.74	0.075	10	06/21/12 08:43	06/23/12 21:51	103-65-1		
Styrene	ND mg/kg	0.74	0.37	10	06/21/12 08:43	06/23/12 21:51	100-42-5		
1,1,1,2-Tetrachloroethane	ND mg/kg	0.74	0.37	10	06/21/12 08:43	06/23/12 21:51	630-20-6		
1,1,2,2-Tetrachloroethane	ND mg/kg	0.74	0.14	10	06/21/12 08:43	06/23/12 21:51	79-34-5		
Tetrachloroethene	ND mg/kg	0.74	0.077	10	06/21/12 08:43	06/23/12 21:51	127-18-4		
Tetrahydrofuran	ND mg/kg	29.6	2.1	10	06/21/12 08:43	06/23/12 21:51	109-99-9		
Toluene	ND mg/kg	0.74	0.11	10	06/21/12 08:43	06/23/12 21:51	108-88-3		
1,2,3-Trichlorobenzene	ND mg/kg	0.74	0.11	10	06/21/12 08:43	06/23/12 21:51	87-61-6		
1,2,4-Trichlorobenzene	ND mg/kg	0.74	0.14	10	06/21/12 08:43	06/23/12 21:51	120-82-1		
1,1,1-Trichloroethane	ND mg/kg	0.74	0.087	10	06/21/12 08:43	06/23/12 21:51	71-55-6		
1,1,2-Trichloroethane	ND mg/kg	0.74	0.18	10	06/21/12 08:43	06/23/12 21:51	79-00-5		
Trichloroethene	ND mg/kg	0.74	0.13	10	06/21/12 08:43	06/23/12 21:51	79-01-6		
Trichlorofluoromethane	ND mg/kg	3.0	0.26	10	06/21/12 08:43	06/23/12 21:51	75-69-4		
1,2,3-Trichloropropane	ND mg/kg	3.0	0.19	10	06/21/12 08:43	06/23/12 21:51	96-18-4		
1,1,2-Trichlorotrifluoroethane	ND mg/kg	0.74	0.13	10	06/21/12 08:43	06/23/12 21:51	76-13-1		
1,2,4-Trimethylbenzene	0.90 mg/kg	0.74	0.089	10	06/21/12 08:43	06/23/12 21:51	95-63-6		
1,3,5-Trimethylbenzene	ND mg/kg	0.74	0.088	10	06/21/12 08:43	06/23/12 21:51	108-67-8		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-01-04 Lab ID: 10196172007 Collected: 06/18/12 13:45 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	ND	mg/kg	0.30	0.11	10	06/21/12 08:43	06/23/12 21:51	75-01-4	
Xylene (Total)	ND	mg/kg	2.2	0.25	10	06/21/12 08:43	06/23/12 21:51	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	77 %		55-127		10	06/21/12 08:43	06/23/12 21:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	80 %		49-125		10	06/21/12 08:43	06/23/12 21:51	17060-07-0	
Toluene-d8 (S)	79 %		56-131		10	06/21/12 08:43	06/23/12 21:51	2037-26-5	
4-Bromofluorobenzene (S)	81 %		53-128		10	06/21/12 08:43	06/23/12 21:51	460-00-4	

ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-01-10 **Lab ID: 10196172008** Collected: 06/18/12 14:10 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB		Analytical Method: EPA 8082 Preparation Method: EPA 3550							
PCB-1016 (Aroclor 1016)	ND mg/kg	0.61	0.22	10	06/21/12 07:28	06/26/12 14:52	12674-11-2		
PCB-1221 (Aroclor 1221)	ND mg/kg	0.61	0.24	10	06/21/12 07:28	06/26/12 14:52	11104-28-2		
PCB-1232 (Aroclor 1232)	ND mg/kg	0.61	0.26	10	06/21/12 07:28	06/26/12 14:52	11141-16-5		
PCB-1242 (Aroclor 1242)	ND mg/kg	0.61	0.15	10	06/21/12 07:28	06/26/12 14:52	53469-21-9		
PCB-1248 (Aroclor 1248)	ND mg/kg	0.61	0.13	10	06/21/12 07:28	06/26/12 14:52	12672-29-6		
PCB-1254 (Aroclor 1254)	ND mg/kg	0.61	0.17	10	06/21/12 07:28	06/26/12 14:52	11097-69-1		
PCB-1260 (Aroclor 1260)	ND mg/kg	0.61	0.22	10	06/21/12 07:28	06/26/12 14:52	11096-82-5		
PCB-1262 (Aroclor 1262)	ND mg/kg	0.61	0.074	10	06/21/12 07:28	06/26/12 14:52	37324-23-5		
PCB-1268 (Aroclor 1268)	ND mg/kg	0.61	0.11	10	06/21/12 07:28	06/26/12 14:52	11100-14-4		
Surrogates									
Tetrachloro-m-xylene (S)	1270 %	30-150		10	06/21/12 07:28	06/26/12 14:52	877-09-8	D3,S5	
Decachlorobiphenyl (S)	145 %	30-150		10	06/21/12 07:28	06/26/12 14:52	2051-24-3		
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	131 mg/kg	32.3	3.6	2	06/21/12 09:36	06/23/12 11:39		T6	
Surrogates									
n-Triacontane (S)	124 %	50-150		2	06/21/12 09:36	06/23/12 11:39			
WIGRO GCV		Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Gasoline Range Organics	365 mg/kg	90.5	8.9	10	06/22/12 14:01	06/24/12 02:41			
Surrogates									
a,a,a-Trifluorotoluene (S)	99 %	80-125		10	06/22/12 14:01	06/24/12 02:41	98-08-8	D3	
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	4.2 mg/kg	0.66	0.16	1	06/21/12 13:43	06/22/12 12:59	7440-38-2		
Barium	21.5 mg/kg	0.66	0.026	1	06/21/12 13:43	06/22/12 12:59	7440-39-3		
Cadmium	0.27 mg/kg	0.066	0.026	1	06/21/12 13:43	06/25/12 10:24	7440-43-9		
Chromium	5.1 mg/kg	0.66	0.33	1	06/21/12 13:43	06/22/12 12:59	7440-47-3		
Lead	9.7 mg/kg	0.40	0.066	1	06/21/12 13:43	06/22/12 12:59	7439-92-1		
Selenium	ND mg/kg	0.99	0.23	1	06/21/12 13:43	06/22/12 12:59	7782-49-2		
Silver	ND mg/kg	0.66	0.079	1	06/21/12 13:43	06/22/12 12:59	7440-22-4		
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	ND mg/kg	0.034	0.010	1	06/21/12 13:29	06/22/12 17:57	7439-97-6		
Dry Weight		Analytical Method: ASTM D2974							
Percent Moisture	46.1 %	0.10	0.10	1			06/21/12 00:00		
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Acenaphthene	78.7 mg/kg	6.1	0.73	10	06/22/12 09:02	06/26/12 12:48	83-32-9		
Acenaphthylene	ND mg/kg	6.1	0.71	10	06/22/12 09:02	06/26/12 12:48	208-96-8		
Anthracene	20.7 mg/kg	6.1	0.79	10	06/22/12 09:02	06/26/12 12:48	120-12-7		
Benzidine	ND mg/kg	29.7	14.8	10	06/22/12 09:02	06/26/12 12:48	92-87-5	CL,L2, SS	
Benzo(a)anthracene	22.6 mg/kg	6.1	0.86	10	06/22/12 09:02	06/26/12 12:48	56-55-3		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-01-10 Lab ID: 10196172008 Collected: 06/18/12 14:10 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Benzo(a)pyrene	11.3 mg/kg		6.1	0.88	10	06/22/12 09:02	06/26/12 12:48	50-32-8	
Benzo(b)fluoranthene	17.5 mg/kg		6.1	0.88	10	06/22/12 09:02	06/26/12 12:48	205-99-2	
Benzo(g,h,i)perylene	ND mg/kg		6.1	0.93	10	06/22/12 09:02	06/26/12 12:48	191-24-2	
Benzo(k)fluoranthene	6.6 mg/kg		6.1	0.85	10	06/22/12 09:02	06/26/12 12:48	207-08-9	
Benzoic acid	ND mg/kg		31.5	8.5	10	06/22/12 09:02	06/26/12 12:48	65-85-0	
Benzyl alcohol	ND mg/kg		12.2	0.90	10	06/22/12 09:02	06/26/12 12:48	100-51-6	
4-Bromophenylphenyl ether	ND mg/kg		6.1	0.93	10	06/22/12 09:02	06/26/12 12:48	101-55-3	
Butylbenzylphthalate	ND mg/kg		6.1	0.83	10	06/22/12 09:02	06/26/12 12:48	85-68-7	
4-Chloro-3-methylphenol	ND mg/kg		6.1	0.72	10	06/22/12 09:02	06/26/12 12:48	59-50-7	
4-Chloroaniline	ND mg/kg		6.1	3.1	10	06/22/12 09:02	06/26/12 12:48	106-47-8	
bis(2-Chloroethoxy)methane	ND mg/kg		6.1	1.0	10	06/22/12 09:02	06/26/12 12:48	111-91-1	
bis(2-Chloroethyl) ether	ND mg/kg		6.1	1.3	10	06/22/12 09:02	06/26/12 12:48	111-44-4	
bis(2-Chloroisopropyl) ether	ND mg/kg		6.1	1.5	10	06/22/12 09:02	06/26/12 12:48	108-60-1	
2-Chloronaphthalene	ND mg/kg		6.1	0.74	10	06/22/12 09:02	06/26/12 12:48	91-58-7	
2-Chlorophenol	ND mg/kg		6.1	1.3	10	06/22/12 09:02	06/26/12 12:48	95-57-8	
4-Chlorophenylphenyl ether	ND mg/kg		6.1	0.82	10	06/22/12 09:02	06/26/12 12:48	7005-72-3	
Chrysene	19.4 mg/kg		6.1	0.88	10	06/22/12 09:02	06/26/12 12:48	218-01-9	
Dibenz(a,h)anthracene	ND mg/kg		6.1	0.95	10	06/22/12 09:02	06/26/12 12:48	53-70-3	
Dibenzo furan	51.3 mg/kg		6.1	0.75	10	06/22/12 09:02	06/26/12 12:48	132-64-9	
1,2-Dichlorobenzene	ND mg/kg		6.1	1.3	10	06/22/12 09:02	06/26/12 12:48	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		6.1	1.4	10	06/22/12 09:02	06/26/12 12:48	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		6.1	1.3	10	06/22/12 09:02	06/26/12 12:48	106-46-7	
3,3'-Dichlorobenzidine	ND mg/kg		12.4	6.2	10	06/22/12 09:02	06/26/12 12:48	91-94-1	
2,4-Dichlorophenol	ND mg/kg		6.1	0.92	10	06/22/12 09:02	06/26/12 12:48	120-83-2	
Diethylphthalate	ND mg/kg		6.1	0.80	10	06/22/12 09:02	06/26/12 12:48	84-66-2	
2,4-Dimethylphenol	ND mg/kg		6.1	3.1	10	06/22/12 09:02	06/26/12 12:48	105-67-9	
Dimethylphthalate	ND mg/kg		6.1	0.85	10	06/22/12 09:02	06/26/12 12:48	131-11-3	
Di-n-butylphthalate	ND mg/kg		6.1	0.63	10	06/22/12 09:02	06/26/12 12:48	84-74-2	
4,6-Dinitro-2-methylphenol	ND mg/kg		31.5	5.2	10	06/22/12 09:02	06/26/12 12:48	534-52-1	
2,4-Dinitrophenol	ND mg/kg		31.5	0.88	10	06/22/12 09:02	06/26/12 12:48	51-28-5	
2,4-Dinitrotoluene	ND mg/kg		6.1	1.0	10	06/22/12 09:02	06/26/12 12:48	121-14-2	
2,6-Dinitrotoluene	ND mg/kg		6.1	0.86	10	06/22/12 09:02	06/26/12 12:48	606-20-2	
Di-n-octylphthalate	ND mg/kg		6.1	0.89	10	06/22/12 09:02	06/26/12 12:48	117-84-0	
bis(2-Ethylhexyl)phthalate	ND mg/kg		6.1	1.4	10	06/22/12 09:02	06/26/12 12:48	117-81-7	
Fluoranthene	113 mg/kg		30.6	3.7	50	06/22/12 09:02	06/26/12 14:43	206-44-0	
Fluorene	72.4 mg/kg		6.1	0.79	10	06/22/12 09:02	06/26/12 12:48	86-73-7	
Hexachloro-1,3-butadiene	ND mg/kg		6.1	1.5	10	06/22/12 09:02	06/26/12 12:48	87-68-3	
Hexachlorobenzene	ND mg/kg		6.1	0.86	10	06/22/12 09:02	06/26/12 12:48	118-74-1	
Hexachlorocyclopentadiene	ND mg/kg		31.5	15.8	10	06/22/12 09:02	06/26/12 12:48	77-47-4	
Hexachloroethane	ND mg/kg		6.1	1.4	10	06/22/12 09:02	06/26/12 12:48	67-72-1	
Indeno(1,2,3-cd)pyrene	ND mg/kg		6.1	0.90	10	06/22/12 09:02	06/26/12 12:48	193-39-5	
Isophorone	ND mg/kg		6.1	0.74	10	06/22/12 09:02	06/26/12 12:48	78-59-1	
2-Methylnaphthalene	50.1 mg/kg		6.1	0.91	10	06/22/12 09:02	06/26/12 12:48	91-57-6	
2-Methylphenol(o-Cresol)	ND mg/kg		6.1	0.94	10	06/22/12 09:02	06/26/12 12:48	95-48-7	
3&4-Methylphenol	ND mg/kg		12.2	0.82	10	06/22/12 09:02	06/26/12 12:48		

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-01-10 Lab ID: 10196172008 Collected: 06/18/12 14:10 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV		Analytical Method: EPA 8270 Preparation Method: EPA 3550							
Naphthalene	180 mg/kg		30.6	6.0	50	06/22/12 09:02	06/26/12 14:43	91-20-3	
2-Nitroaniline	ND mg/kg		31.5	0.85	10	06/22/12 09:02	06/26/12 12:48	88-74-4	
3-Nitroaniline	ND mg/kg		31.5	1.2	10	06/22/12 09:02	06/26/12 12:48	99-09-2	
4-Nitroaniline	ND mg/kg		31.5	6.3	10	06/22/12 09:02	06/26/12 12:48	100-01-6	
Nitrobenzene	ND mg/kg		6.1	1.2	10	06/22/12 09:02	06/26/12 12:48	98-95-3	
2-Nitrophenol	ND mg/kg		6.1	1.0	10	06/22/12 09:02	06/26/12 12:48	88-75-5	
4-Nitrophenol	ND mg/kg		31.5	15.8	10	06/22/12 09:02	06/26/12 12:48	100-02-7	
N-Nitroso-di-n-propylamine	ND mg/kg		6.1	0.95	10	06/22/12 09:02	06/26/12 12:48	621-64-7	
N-Nitrosodiphenylamine	ND mg/kg		6.1	0.89	10	06/22/12 09:02	06/26/12 12:48	86-30-6	
Pentachlorophenol	ND mg/kg		12.4	6.2	10	06/22/12 09:02	06/26/12 12:48	87-86-5	
Phenanthrene	203 mg/kg		30.6	4.1	50	06/22/12 09:02	06/26/12 14:43	85-01-8	
Phenol	ND mg/kg		6.1	1.1	10	06/22/12 09:02	06/26/12 12:48	108-95-2	
Pyrene	82.7 mg/kg		6.1	0.85	10	06/22/12 09:02	06/26/12 12:48	129-00-0	
1,2,4-Trichlorobenzene	ND mg/kg		6.1	1.3	10	06/22/12 09:02	06/26/12 12:48	120-82-1	
2,4,5-Trichlorophenol	ND mg/kg		31.5	1.0	10	06/22/12 09:02	06/26/12 12:48	95-95-4	
2,4,6-Trichlorophenol	ND mg/kg		6.1	0.91	10	06/22/12 09:02	06/26/12 12:48	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	80 %		30-141		10	06/22/12 09:02	06/26/12 12:48	4165-60-0	D4
2-Fluorobiphenyl (S)	77 %		30-145		10	06/22/12 09:02	06/26/12 12:48	321-60-8	
Terphenyl-d14 (S)	83 %		30-150		10	06/22/12 09:02	06/26/12 12:48	1718-51-0	
Phenol-d6 (S)	69 %		30-142		10	06/22/12 09:02	06/26/12 12:48	13127-88-3	
2-Fluorophenol (S)	72 %		30-137		10	06/22/12 09:02	06/26/12 12:48	367-12-4	
2,4,6-Tribromophenol (S)	74 %		30-150		10	06/22/12 09:02	06/26/12 12:48	118-79-6	
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND mg/kg		46.7	23.4	20	06/21/12 08:43	06/22/12 12:46	67-64-1	
Allyl chloride	ND mg/kg		7.5	0.55	20	06/21/12 08:43	06/22/12 12:46	107-05-1	
Benzene	0.88 mg/kg		0.75	0.18	20	06/21/12 08:43	06/22/12 12:46	71-43-2	
Bromobenzene	ND mg/kg		1.9	0.19	20	06/21/12 08:43	06/22/12 12:46	108-86-1	
Bromochloromethane	ND mg/kg		1.9	0.32	20	06/21/12 08:43	06/22/12 12:46	74-97-5	
Bromodichloromethane	ND mg/kg		1.9	0.30	20	06/21/12 08:43	06/22/12 12:46	75-27-4	
Bromoform	ND mg/kg		7.5	0.35	20	06/21/12 08:43	06/22/12 12:46	75-25-2	
Bromomethane	ND mg/kg		18.7	0.80	20	06/21/12 08:43	06/22/12 12:46	74-83-9	
2-Butanone (MEK)	ND mg/kg		18.7	9.3	20	06/21/12 08:43	06/22/12 12:46	78-93-3	
n-Butylbenzene	ND mg/kg		1.9	0.24	20	06/21/12 08:43	06/22/12 12:46	104-51-8	
sec-Butylbenzene	ND mg/kg		1.9	0.16	20	06/21/12 08:43	06/22/12 12:46	135-98-8	
tert-Butylbenzene	ND mg/kg		1.9	0.19	20	06/21/12 08:43	06/22/12 12:46	98-06-6	
Carbon tetrachloride	ND mg/kg		1.9	0.36	20	06/21/12 08:43	06/22/12 12:46	56-23-5	
Chlorobenzene	ND mg/kg		1.9	0.21	20	06/21/12 08:43	06/22/12 12:46	108-90-7	
Chloroethane	ND mg/kg		18.7	0.86	20	06/21/12 08:43	06/22/12 12:46	75-00-3	
Chloroform	ND mg/kg		1.9	0.14	20	06/21/12 08:43	06/22/12 12:46	67-66-3	
Chloromethane	ND mg/kg		7.5	0.25	20	06/21/12 08:43	06/22/12 12:46	74-87-3	
2-Chlorotoluene	ND mg/kg		1.9	0.25	20	06/21/12 08:43	06/22/12 12:46	95-49-8	
4-Chlorotoluene	ND mg/kg		1.9	0.24	20	06/21/12 08:43	06/22/12 12:46	106-43-4	
1,2-Dibromo-3-chloropropane	ND mg/kg		7.5	0.85	20	06/21/12 08:43	06/22/12 12:46	96-12-8	L3

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-01-10 Lab ID: 10196172008 Collected: 06/18/12 14:10 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Dibromochloromethane	ND mg/kg		1.9	0.16	20	06/21/12 08:43	06/22/12 12:46	124-48-1	
1,2-Dibromoethane (EDB)	ND mg/kg		1.9	0.22	20	06/21/12 08:43	06/22/12 12:46	106-93-4	
Dibromomethane	ND mg/kg		1.9	0.35	20	06/21/12 08:43	06/22/12 12:46	74-95-3	
1,2-Dichlorobenzene	ND mg/kg		1.9	0.22	20	06/21/12 08:43	06/22/12 12:46	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		1.9	0.15	20	06/21/12 08:43	06/22/12 12:46	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		1.9	0.21	20	06/21/12 08:43	06/22/12 12:46	106-46-7	
Dichlorodifluoromethane	ND mg/kg		1.9	0.42	20	06/21/12 08:43	06/22/12 12:46	75-71-8	
1,1-Dichloroethane	ND mg/kg		1.9	0.93	20	06/21/12 08:43	06/22/12 12:46	75-34-3	
1,2-Dichloroethane	ND mg/kg		1.9	0.24	20	06/21/12 08:43	06/22/12 12:46	107-06-2	
1,1-Dichloroethene	ND mg/kg		1.9	0.27	20	06/21/12 08:43	06/22/12 12:46	75-35-4	
cis-1,2-Dichloroethene	ND mg/kg		1.9	0.32	20	06/21/12 08:43	06/22/12 12:46	156-59-2	
trans-1,2-Dichloroethene	ND mg/kg		1.9	0.35	20	06/21/12 08:43	06/22/12 12:46	156-60-5	
Dichlorofluoromethane	ND mg/kg		18.7	1.2	20	06/21/12 08:43	06/22/12 12:46	75-43-4	
1,2-Dichloropropane	ND mg/kg		1.9	0.93	20	06/21/12 08:43	06/22/12 12:46	78-87-5	
1,3-Dichloropropane	ND mg/kg		1.9	0.23	20	06/21/12 08:43	06/22/12 12:46	142-28-9	
2,2-Dichloropropane	ND mg/kg		7.5	0.27	20	06/21/12 08:43	06/22/12 12:46	594-20-7	
1,1-Dichloropropene	ND mg/kg		1.9	0.26	20	06/21/12 08:43	06/22/12 12:46	563-58-6	
cis-1,3-Dichloropropene	ND mg/kg		1.9	0.29	20	06/21/12 08:43	06/22/12 12:46	10061-01-5	
trans-1,3-Dichloropropene	ND mg/kg		1.9	0.32	20	06/21/12 08:43	06/22/12 12:46	10061-02-6	
Diethyl ether (Ethyl ether)	ND mg/kg		7.5	0.61	20	06/21/12 08:43	06/22/12 12:46	60-29-7	
Ethylbenzene	ND mg/kg		1.9	0.16	20	06/21/12 08:43	06/22/12 12:46	100-41-4	
Hexachloro-1,3-butadiene	ND mg/kg		9.3	0.37	20	06/21/12 08:43	06/22/12 12:46	87-68-3	
Isopropylbenzene (Cumene)	ND mg/kg		1.9	0.23	20	06/21/12 08:43	06/22/12 12:46	98-82-8	
p-Isopropyltoluene	ND mg/kg		1.9	0.22	20	06/21/12 08:43	06/22/12 12:46	99-87-6	
Methylene Chloride	ND mg/kg		7.5	3.7	20	06/21/12 08:43	06/22/12 12:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND mg/kg		18.7	9.3	20	06/21/12 08:43	06/22/12 12:46	108-10-1	
Methyl-tert-butyl ether	ND mg/kg		1.9	0.34	20	06/21/12 08:43	06/22/12 12:46	1634-04-4	
Naphthalene	1120 mg/kg		37.4	1.1	100	06/21/12 08:43	06/23/12 22:13	91-20-3	
n-Propylbenzene	ND mg/kg		1.9	0.19	20	06/21/12 08:43	06/22/12 12:46	103-65-1	
Styrene	ND mg/kg		1.9	0.93	20	06/21/12 08:43	06/22/12 12:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND mg/kg		1.9	0.93	20	06/21/12 08:43	06/22/12 12:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND mg/kg		1.9	0.35	20	06/21/12 08:43	06/22/12 12:46	79-34-5	
Tetrachloroethene	ND mg/kg		1.9	0.19	20	06/21/12 08:43	06/22/12 12:46	127-18-4	
Tetrahydrofuran	ND mg/kg		74.8	5.3	20	06/21/12 08:43	06/22/12 12:46	109-99-9	
Toluene	ND mg/kg		1.9	0.28	20	06/21/12 08:43	06/22/12 12:46	108-88-3	
1,2,3-Trichlorobenzene	ND mg/kg		1.9	0.28	20	06/21/12 08:43	06/22/12 12:46	87-61-6	
1,2,4-Trichlorobenzene	ND mg/kg		1.9	0.35	20	06/21/12 08:43	06/22/12 12:46	120-82-1	
1,1,1-Trichloroethane	ND mg/kg		1.9	0.22	20	06/21/12 08:43	06/22/12 12:46	71-55-6	
1,1,2-Trichloroethane	ND mg/kg		1.9	0.46	20	06/21/12 08:43	06/22/12 12:46	79-00-5	
Trichloroethene	ND mg/kg		1.9	0.33	20	06/21/12 08:43	06/22/12 12:46	79-01-6	
Trichlorofluoromethane	ND mg/kg		7.5	0.66	20	06/21/12 08:43	06/22/12 12:46	75-69-4	
1,2,3-Trichloropropane	ND mg/kg		7.5	0.49	20	06/21/12 08:43	06/22/12 12:46	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND mg/kg		1.9	0.32	20	06/21/12 08:43	06/22/12 12:46	76-13-1	
1,2,4-Trimethylbenzene	2.0 mg/kg		1.9	0.22	20	06/21/12 08:43	06/22/12 12:46	95-63-6	
1,3,5-Trimethylbenzene	ND mg/kg		1.9	0.22	20	06/21/12 08:43	06/22/12 12:46	108-67-8	

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: MC-01-10 Lab ID: 10196172008 Collected: 06/18/12 14:10 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	ND	mg/kg	0.75	0.28	20	06/21/12 08:43	06/22/12 12:46	75-01-4	
Xylene (Total)	ND	mg/kg	5.6	0.62	20	06/21/12 08:43	06/22/12 12:46	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	111 %		55-127		20	06/21/12 08:43	06/22/12 12:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	122 %		49-125		20	06/21/12 08:43	06/22/12 12:46	17060-07-0	
Toluene-d8 (S)	101 %		56-131		20	06/21/12 08:43	06/22/12 12:46	2037-26-5	
4-Bromofluorobenzene (S)	110 %		53-128		20	06/21/12 08:43	06/22/12 12:46	460-00-4	

ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: TRIP BLANK Lab ID: **10196172009** Collected: 06/18/12 00:00 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	ND mg/kg		1.2	0.62	1	06/21/12 08:43	06/22/12 05:57	67-64-1	
Allyl chloride	ND mg/kg		0.20	0.015	1	06/21/12 08:43	06/22/12 05:57	107-05-1	
Benzene	ND mg/kg		0.020	0.0047	1	06/21/12 08:43	06/22/12 05:57	71-43-2	
Bromobenzene	ND mg/kg		0.050	0.0050	1	06/21/12 08:43	06/22/12 05:57	108-86-1	
Bromochloromethane	ND mg/kg		0.050	0.0086	1	06/21/12 08:43	06/22/12 05:57	74-97-5	
Bromodichloromethane	ND mg/kg		0.050	0.0079	1	06/21/12 08:43	06/22/12 05:57	75-27-4	
Bromoform	ND mg/kg		0.20	0.0093	1	06/21/12 08:43	06/22/12 05:57	75-25-2	L3
Bromomethane	ND mg/kg		0.50	0.021	1	06/21/12 08:43	06/22/12 05:57	74-83-9	
2-Butanone (MEK)	ND mg/kg		0.50	0.25	1	06/21/12 08:43	06/22/12 05:57	78-93-3	
n-Butylbenzene	ND mg/kg		0.050	0.0065	1	06/21/12 08:43	06/22/12 05:57	104-51-8	
sec-Butylbenzene	ND mg/kg		0.050	0.0042	1	06/21/12 08:43	06/22/12 05:57	135-98-8	
tert-Butylbenzene	ND mg/kg		0.050	0.0052	1	06/21/12 08:43	06/22/12 05:57	98-06-6	
Carbon tetrachloride	ND mg/kg		0.050	0.0096	1	06/21/12 08:43	06/22/12 05:57	56-23-5	
Chlorobenzene	ND mg/kg		0.050	0.0057	1	06/21/12 08:43	06/22/12 05:57	108-90-7	
Chloroethane	ND mg/kg		0.50	0.023	1	06/21/12 08:43	06/22/12 05:57	75-00-3	
Chloroform	ND mg/kg		0.050	0.0038	1	06/21/12 08:43	06/22/12 05:57	67-66-3	
Chloromethane	ND mg/kg		0.20	0.0066	1	06/21/12 08:43	06/22/12 05:57	74-87-3	
2-Chlorotoluene	ND mg/kg		0.050	0.0067	1	06/21/12 08:43	06/22/12 05:57	95-49-8	
4-Chlorotoluene	ND mg/kg		0.050	0.0064	1	06/21/12 08:43	06/22/12 05:57	106-43-4	
1,2-Dibromo-3-chloropropane	ND mg/kg		0.20	0.023	1	06/21/12 08:43	06/22/12 05:57	96-12-8	L3
Dibromochloromethane	ND mg/kg		0.050	0.0042	1	06/21/12 08:43	06/22/12 05:57	124-48-1	
1,2-Dibromoethane (EDB)	ND mg/kg		0.050	0.0058	1	06/21/12 08:43	06/22/12 05:57	106-93-4	
Dibromomethane	ND mg/kg		0.050	0.0094	1	06/21/12 08:43	06/22/12 05:57	74-95-3	
1,2-Dichlorobenzene	ND mg/kg		0.050	0.0058	1	06/21/12 08:43	06/22/12 05:57	95-50-1	
1,3-Dichlorobenzene	ND mg/kg		0.050	0.0040	1	06/21/12 08:43	06/22/12 05:57	541-73-1	
1,4-Dichlorobenzene	ND mg/kg		0.050	0.0056	1	06/21/12 08:43	06/22/12 05:57	106-46-7	
Dichlorodifluoromethane	ND mg/kg		0.050	0.011	1	06/21/12 08:43	06/22/12 05:57	75-71-8	
1,1-Dichloroethane	ND mg/kg		0.050	0.025	1	06/21/12 08:43	06/22/12 05:57	75-34-3	
1,2-Dichloroethane	ND mg/kg		0.050	0.0065	1	06/21/12 08:43	06/22/12 05:57	107-06-2	
1,1-Dichloroethene	ND mg/kg		0.050	0.0073	1	06/21/12 08:43	06/22/12 05:57	75-35-4	
cis-1,2-Dichloroethene	ND mg/kg		0.050	0.0086	1	06/21/12 08:43	06/22/12 05:57	156-59-2	
trans-1,2-Dichloroethene	ND mg/kg		0.050	0.0093	1	06/21/12 08:43	06/22/12 05:57	156-60-5	
Dichlorofluoromethane	ND mg/kg		0.50	0.032	1	06/21/12 08:43	06/22/12 05:57	75-43-4	
1,2-Dichloropropane	ND mg/kg		0.050	0.025	1	06/21/12 08:43	06/22/12 05:57	78-87-5	
1,3-Dichloropropane	ND mg/kg		0.050	0.0062	1	06/21/12 08:43	06/22/12 05:57	142-28-9	
2,2-Dichloropropane	ND mg/kg		0.20	0.0071	1	06/21/12 08:43	06/22/12 05:57	594-20-7	
1,1-Dichloropropene	ND mg/kg		0.050	0.0069	1	06/21/12 08:43	06/22/12 05:57	563-58-6	
cis-1,3-Dichloropropene	ND mg/kg		0.050	0.0078	1	06/21/12 08:43	06/22/12 05:57	10061-01-5	
trans-1,3-Dichloropropene	ND mg/kg		0.050	0.0084	1	06/21/12 08:43	06/22/12 05:57	10061-02-6	
Diethyl ether (Ethyl ether)	ND mg/kg		0.20	0.016	1	06/21/12 08:43	06/22/12 05:57	60-29-7	
Ethylbenzene	ND mg/kg		0.050	0.0042	1	06/21/12 08:43	06/22/12 05:57	100-41-4	
Hexachloro-1,3-butadiene	ND mg/kg		0.25	0.010	1	06/21/12 08:43	06/22/12 05:57	87-68-3	
Isopropylbenzene (Cumene)	ND mg/kg		0.050	0.0060	1	06/21/12 08:43	06/22/12 05:57	98-82-8	
p-Isopropyltoluene	ND mg/kg		0.050	0.0059	1	06/21/12 08:43	06/22/12 05:57	99-87-6	
Methylene Chloride	ND mg/kg		0.20	0.10	1	06/21/12 08:43	06/22/12 05:57	75-09-2	

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ANALYTICAL RESULTS

Project: MCES 120761 REV

Pace Project No.: 10196172

Sample: TRIP BLANK Lab ID: **10196172009** Collected: 06/18/12 00:00 Received: 06/20/12 13:28 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	ND mg/kg		0.50	0.25	1	06/21/12 08:43	06/22/12 05:57	108-10-1	
Methyl-tert-butyl ether	ND mg/kg		0.050	0.0090	1	06/21/12 08:43	06/22/12 05:57	1634-04-4	
Naphthalene	ND mg/kg		0.20	0.0057	1	06/21/12 08:43	06/22/12 05:57	91-20-3	
n-Propylbenzene	ND mg/kg		0.050	0.0050	1	06/21/12 08:43	06/22/12 05:57	103-65-1	
Styrene	ND mg/kg		0.050	0.025	1	06/21/12 08:43	06/22/12 05:57	100-42-5	
1,1,1,2-Tetrachloroethane	ND mg/kg		0.050	0.025	1	06/21/12 08:43	06/22/12 05:57	630-20-6	
1,1,2,2-Tetrachloroethane	ND mg/kg		0.050	0.0093	1	06/21/12 08:43	06/22/12 05:57	79-34-5	
Tetrachloroethylene	ND mg/kg		0.050	0.0052	1	06/21/12 08:43	06/22/12 05:57	127-18-4	
Tetrahydrofuran	ND mg/kg		2.0	0.14	1	06/21/12 08:43	06/22/12 05:57	109-99-9	
Toluene	ND mg/kg		0.050	0.0076	1	06/21/12 08:43	06/22/12 05:57	108-88-3	
1,2,3-Trichlorobenzene	ND mg/kg		0.050	0.0075	1	06/21/12 08:43	06/22/12 05:57	87-61-6	
1,2,4-Trichlorobenzene	ND mg/kg		0.050	0.0094	1	06/21/12 08:43	06/22/12 05:57	120-82-1	
1,1,1-Trichloroethane	ND mg/kg		0.050	0.0059	1	06/21/12 08:43	06/22/12 05:57	71-55-6	
1,1,2-Trichloroethane	ND mg/kg		0.050	0.012	1	06/21/12 08:43	06/22/12 05:57	79-00-5	
Trichloroethylene	ND mg/kg		0.050	0.0087	1	06/21/12 08:43	06/22/12 05:57	79-01-6	
Trichlorofluoromethane	ND mg/kg		0.20	0.018	1	06/21/12 08:43	06/22/12 05:57	75-69-4	
1,2,3-Trichloropropane	ND mg/kg		0.20	0.013	1	06/21/12 08:43	06/22/12 05:57	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND mg/kg		0.050	0.0086	1	06/21/12 08:43	06/22/12 05:57	76-13-1	
1,2,4-Trimethylbenzene	ND mg/kg		0.050	0.0060	1	06/21/12 08:43	06/22/12 05:57	95-63-6	
1,3,5-Trimethylbenzene	ND mg/kg		0.050	0.0059	1	06/21/12 08:43	06/22/12 05:57	108-67-8	
Vinyl chloride	ND mg/kg		0.020	0.0074	1	06/21/12 08:43	06/22/12 05:57	75-01-4	
Xylene (Total)	ND mg/kg		0.15	0.017	1	06/21/12 08:43	06/22/12 05:57	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	174 %		55-127		1	06/21/12 08:43	06/22/12 05:57	1868-53-7	S3
1,2-Dichloroethane-d4 (S)	174 %		49-125		1	06/21/12 08:43	06/22/12 05:57	17060-07-0	S3
Toluene-d8 (S)	174 %		56-131		1	06/21/12 08:43	06/22/12 05:57	2037-26-5	S3
4-Bromofluorobenzene (S)	175 %		53-128		1	06/21/12 08:43	06/22/12 05:57	460-00-4	S3

QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch: GCV/9427 Analysis Method: WI MOD GRO

QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008

METHOD BLANK: 1224365 Matrix: Solid

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008

Parameter	Units	Blank	Reporting		Analyzed	Qualifiers
		Result	Limit			
Gasoline Range Organics	mg/kg	ND	5.0	06/24/12 00:45		
a,a,a-Trifluorotoluene (S)	%	98	80-125	06/24/12 00:45		

LABORATORY CONTROL SAMPLE & LCSD: 1224366 1224367

Parameter	Units	Spike	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max	RPD	Qualifiers
		Conc.	Result	Result	% Rec	% Rec	Limits				
Gasoline Range Organics	mg/kg	50	50.8	46.2	102	92	80-120		9	20	
a,a,a-Trifluorotoluene (S)	%				97	98	80-125				

MATRIX SPIKE SAMPLE: 1224368

Parameter	Units	10196359001	Spike	MS	MS	% Rec	Limits	Qualifiers
		Result	Conc.	Result	% Rec			
Gasoline Range Organics	mg/kg	ND	57	67.1	118	80-120		
a,a,a-Trifluorotoluene (S)	%				97	80-125		

SAMPLE DUPLICATE: 1224369

Parameter	Units	10196359002	Dup	RPD	Max	RPD	Qualifiers
		Result	Result				
Gasoline Range Organics	mg/kg	ND	ND		20		
a,a,a-Trifluorotoluene (S)	%	98	99	1			

QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch:	MERP/7016	Analysis Method:	EPA 7471
QC Batch Method:	EPA 7471	Analysis Description:	7471 Mercury
Associated Lab Samples:	10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008		

METHOD BLANK: 1223197 Matrix: Solid

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.019	06/22/12 17:07	

LABORATORY CONTROL SAMPLE: 1223198

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.44	0.43	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223199 1223200

Parameter	Units	10196157001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
Mercury	mg/kg	0.10	.54	.52	0.82	0.56	131	87	80-120	37	20	D6,M1

MATRIX SPIKE SAMPLE: 1223201

Parameter	Units	10196124003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	ND	.43	ND	0	80-120	M1

QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch:	MPRP/33133	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
Associated Lab Samples:	10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008		

METHOD BLANK: 1222995 Matrix: Solid

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
Arsenic	mg/kg	ND	0.45	06/22/12 11:32	
Barium	mg/kg	ND	0.45	06/22/12 11:32	
Cadmium	mg/kg	ND	0.045	06/22/12 11:32	
Chromium	mg/kg	ND	0.45	06/22/12 11:32	
Lead	mg/kg	ND	0.27	06/22/12 11:32	
Selenium	mg/kg	ND	0.68	06/22/12 11:32	
Silver	mg/kg	ND	0.45	06/22/12 11:32	

LABORATORY CONTROL SAMPLE: 1222996

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Arsenic	mg/kg	35.2	32.8	93	80-120	
Barium	mg/kg	35.2	34.2	97	80-120	
Cadmium	mg/kg	35.2	33.2	94	80-120	
Chromium	mg/kg	35.2	34.0	97	80-120	
Lead	mg/kg	35.2	33.5	95	80-120	
Selenium	mg/kg	35.2	33.2	94	80-120	
Silver	mg/kg	17.6	16.6	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222998 1222999

Parameter	Units	10196172002	MS	MSD	MS	% Rec	MSD	% Rec	% Rec	Limits	RPD	RPD	Max
		Result	Spike	Spike									
Arsenic	mg/kg	5.2	35.6	51	32.4	48.1	76	84	75-125	39	30	D6	
Barium	mg/kg	29.4	35.6	51	53.0	73.3	66	86	75-125	32	30	D6,M1	
Cadmium	mg/kg	ND	35.6	51	25.4	40.6	71	80	75-125	46	30	D6,M1	
Chromium	mg/kg	7.4	35.6	51	32.9	50.9	71	85	75-125	43	30	D6,M1	
Lead	mg/kg	1.9	35.6	51	26.4	41.7	69	78	75-125	45	30	D6,M1	
Selenium	mg/kg	ND	35.6	51	24.2	38.9	68	76	75-125	46	30	D6,M1	
Silver	mg/kg	ND	17.8	25.5	13.7	21.8	77	85	75-125	45	30	D6	

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch:	MPRP/33674	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET TCLP
Associated Lab Samples:	10196172001		

METHOD BLANK: 1239184 Matrix: Water

Associated Lab Samples: 10196172001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	ND	0.015	07/13/12 13:18	

LABORATORY CONTROL SAMPLE: 1239185

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	1	0.95	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1239186 1239187

Parameter	Units	10196172001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Lead	mg/L	0.094	1	1	1.0	1.0	91	93	75-125	2	30	

MATRIX SPIKE SAMPLE: 1239188

Parameter	Units	10198068001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	0.077	1	1.1	98	75-125	

QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch:	MPRP/33651	Analysis Method:	EPA 6020
QC Batch Method:	EPA 3050	Analysis Description:	6020 MET
Associated Lab Samples:	10196172001		

METHOD BLANK: 1238363 Matrix: Solid

Associated Lab Samples: 10196172001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.47	07/17/12 07:47	

LABORATORY CONTROL SAMPLE: 1238364

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	16.3	15.4	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1238365 1238366

Parameter	Units	10196172001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Arsenic	mg/kg	5.1	21.7	22.5	24.0	25.7	87	91	75-125	7	30	

QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch: MPRP/33134 Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 10196172001, 10196172002, 10196172003

SAMPLE DUPLICATE: 1223007

Parameter	Units	10196172003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.2	7.8	8	30	

SAMPLE DUPLICATE: 1223040

Parameter	Units	10196157001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.8	8.0	2	30	

QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch: MPRP/33139

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 10196172004, 10196172005, 10196172006, 10196172007, 10196172008

SAMPLE DUPLICATE: 1223185

Parameter	Units	10196207001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.4	16.1	12	30	

SAMPLE DUPLICATE: 1223236

Parameter	Units	10196020009 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	48.5	48.7	.5	30	

QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch: MSV/20539

Analysis Method: EPA 8260

QC Batch Method: EPA 5035/5030B

Analysis Description: 8260 MSV 5030 Med Level

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007,
10196172008, 10196172009

METHOD BLANK: 1222971

Matrix: Solid

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007,
10196172008, 10196172009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.050	06/22/12 04:52	
1,1,1-Trichloroethane	mg/kg	ND	0.050	06/22/12 04:52	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.050	06/22/12 04:52	
1,1,2-Trichloroethane	mg/kg	ND	0.050	06/22/12 04:52	
1,1,2-Trichlorotrifluoroethane	mg/kg	ND	0.050	06/22/12 04:52	
1,1-Dichloroethane	mg/kg	ND	0.050	06/22/12 04:52	
1,1-Dichloroethene	mg/kg	ND	0.050	06/22/12 04:52	
1,1-Dichloropropene	mg/kg	ND	0.050	06/22/12 04:52	
1,2,3-Trichlorobenzene	mg/kg	ND	0.050	06/22/12 04:52	
1,2,3-Trichloropropane	mg/kg	ND	0.20	06/22/12 04:52	
1,2,4-Trichlorobenzene	mg/kg	ND	0.050	06/22/12 04:52	
1,2,4-Trimethylbenzene	mg/kg	ND	0.050	06/22/12 04:52	
1,2-Dibromo-3-chloropropane	mg/kg	ND	0.20	06/22/12 04:52	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.050	06/22/12 04:52	
1,2-Dichlorobenzene	mg/kg	ND	0.050	06/22/12 04:52	
1,2-Dichloroethane	mg/kg	ND	0.050	06/22/12 04:52	
1,2-Dichloropropene	mg/kg	ND	0.050	06/22/12 04:52	
1,3,5-Trimethylbenzene	mg/kg	ND	0.050	06/22/12 04:52	
1,3-Dichlorobenzene	mg/kg	ND	0.050	06/22/12 04:52	
1,3-Dichloropropane	mg/kg	ND	0.050	06/22/12 04:52	
1,4-Dichlorobenzene	mg/kg	ND	0.050	06/22/12 04:52	
2,2-Dichloropropane	mg/kg	ND	0.20	06/22/12 04:52	
2-Butanone (MEK)	mg/kg	ND	0.50	06/22/12 04:52	
2-Chlorotoluene	mg/kg	ND	0.050	06/22/12 04:52	
4-Chlorotoluene	mg/kg	ND	0.050	06/22/12 04:52	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.50	06/22/12 04:52	
Acetone	mg/kg	ND	1.2	06/22/12 04:52	
Allyl chloride	mg/kg	ND	0.20	06/22/12 04:52	
Benzene	mg/kg	ND	0.020	06/22/12 04:52	
Bromobenzene	mg/kg	ND	0.050	06/22/12 04:52	
Bromochloromethane	mg/kg	ND	0.050	06/22/12 04:52	
Bromodichloromethane	mg/kg	ND	0.050	06/22/12 04:52	
Bromoform	mg/kg	ND	0.20	06/22/12 04:52	
Bromomethane	mg/kg	ND	0.50	06/22/12 04:52	
Carbon tetrachloride	mg/kg	ND	0.050	06/22/12 04:52	
Chlorobenzene	mg/kg	ND	0.050	06/22/12 04:52	
Chloroethane	mg/kg	ND	0.50	06/22/12 04:52	
Chloroform	mg/kg	ND	0.050	06/22/12 04:52	
Chloromethane	mg/kg	ND	0.20	06/22/12 04:52	
cis-1,2-Dichloroethene	mg/kg	ND	0.050	06/22/12 04:52	
cis-1,3-Dichloropropene	mg/kg	ND	0.050	06/22/12 04:52	

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

METHOD BLANK: 1222971

Matrix: Solid

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007,
10196172008, 10196172009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	mg/kg	ND	0.050	06/22/12 04:52	
Dibromomethane	mg/kg	ND	0.050	06/22/12 04:52	
Dichlorodifluoromethane	mg/kg	ND	0.050	06/22/12 04:52	
Dichlorofluoromethane	mg/kg	ND	0.50	06/22/12 04:52	
Diethyl ether (Ethyl ether)	mg/kg	ND	0.20	06/22/12 04:52	
Ethylbenzene	mg/kg	ND	0.050	06/22/12 04:52	
Hexachloro-1,3-butadiene	mg/kg	ND	0.25	06/22/12 04:52	
Isopropylbenzene (Cumene)	mg/kg	ND	0.050	06/22/12 04:52	
Methyl-tert-butyl ether	mg/kg	ND	0.050	06/22/12 04:52	
Methylene Chloride	mg/kg	ND	0.20	06/22/12 04:52	
n-Butylbenzene	mg/kg	ND	0.050	06/22/12 04:52	
n-Propylbenzene	mg/kg	ND	0.050	06/22/12 04:52	
Naphthalene	mg/kg	ND	0.20	06/22/12 04:52	
p-Isopropyltoluene	mg/kg	ND	0.050	06/22/12 04:52	
sec-Butylbenzene	mg/kg	ND	0.050	06/22/12 04:52	
Styrene	mg/kg	ND	0.050	06/22/12 04:52	
tert-Butylbenzene	mg/kg	ND	0.050	06/22/12 04:52	
Tetrachloroethene	mg/kg	ND	0.050	06/22/12 04:52	
Tetrahydrofuran	mg/kg	ND	2.0	06/22/12 04:52	
Toluene	mg/kg	ND	0.050	06/22/12 04:52	
trans-1,2-Dichloroethene	mg/kg	ND	0.050	06/22/12 04:52	
trans-1,3-Dichloropropene	mg/kg	ND	0.050	06/22/12 04:52	
Trichloroethene	mg/kg	ND	0.050	06/22/12 04:52	
Trichlorofluoromethane	mg/kg	ND	0.20	06/22/12 04:52	
Vinyl chloride	mg/kg	ND	0.020	06/22/12 04:52	
Xylene (Total)	mg/kg	ND	0.15	06/22/12 04:52	
1,2-Dichloroethane-d4 (S)	%	101	49-125	06/22/12 04:52	
4-Bromofluorobenzene (S)	%	97	53-128	06/22/12 04:52	
Dibromofluoromethane (S)	%	97	55-127	06/22/12 04:52	
Toluene-d8 (S)	%	95	56-131	06/22/12 04:52	

LABORATORY CONTROL SAMPLE & LCSD: 1222972

1222973

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	1	1.1	1.2	110	125	72-125	12	20	
1,1,1-Trichloroethane	mg/kg	1	1.0	1.1	104	110	68-134	6	20	
1,1,2,2-Tetrachloroethane	mg/kg	1	1.1	1.1	109	113	74-125	3	20	
1,1,2-Trichloroethane	mg/kg	1	1.1	1.1	107	109	75-125	2	20	
1,1,2-Trichlorotrifluoroethane	mg/kg	1	1.2	1.2	115	116	44-150	.3	20	
1,1-Dichloroethane	mg/kg	1	1.1	1.1	105	108	74-125	3	20	
1,1-Dichloroethene	mg/kg	1	1.0	1.0	102	105	64-133	3	20	
1,1-Dichloropropene	mg/kg	1	1.0	1.0	104	103	70-134	.8	20	
1,2,3-Trichlorobenzene	mg/kg	1	1.1	1.2	114	116	70-125	2	20	
1,2,3-Trichloropropane	mg/kg	1	1.1	1.1	110	112	71-125	2	20	

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

LABORATORY CONTROL SAMPLE & LCSD:		1222972		1222973							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	% Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
1,2,4-Trichlorobenzene	mg/kg		1	1.1	1.1	112	114	69-125	2	20	
1,2,4-Trimethylbenzene	mg/kg		1	1.1	1.0	107	104	75-129	3	20	
1,2-Dibromo-3-chloropropane	mg/kg		1	1.2	1.6	122	155	62-127	24	20 D6,L0	
1,2-Dibromoethane (EDB)	mg/kg		1	1.1	1.2	111	116	73-125	5	20	
1,2-Dichlorobenzene	mg/kg		1	1.0	1.0	104	104	75-125	.1	20	
1,2-Dichloroethane	mg/kg		1	1.1	1.1	110	108	70-131	2	20	
1,2-Dichloropropane	mg/kg		1	1.0	1.1	104	107	75-125	2	20	
1,3,5-Trimethylbenzene	mg/kg		1	1.0	1.0	104	101	74-130	3	20	
1,3-Dichlorobenzene	mg/kg		1	1.1	1.1	107	106	75-125	1	20	
1,3-Dichloropropane	mg/kg		1	1.1	1.1	108	111	75-125	3	20	
1,4-Dichlorobenzene	mg/kg		1	1.1	1.1	109	106	75-125	2	20	
2,2-Dichloropropane	mg/kg		1	0.85	0.83	85	83	46-144	1	20	
2-Butanone (MEK)	mg/kg		1	1.0	1.1	101	114	41-150	12	20	
2-Chlorotoluene	mg/kg		1	1.0	1.0	102	100	75-127	1	20	
4-Chlorotoluene	mg/kg		1	1.1	1.0	107	104	75-127	3	20	
4-Methyl-2-pentanone (MIBK)	mg/kg		1	0.97	1.0	97	101	67-127	4	20	
Acetone	mg/kg	2.5	2.5	2.9	100	116	30-150	15	20		
Allyl chloride	mg/kg		1	1.0	1.1	103	109	68-139	5	20	
Benzene	mg/kg		1	1.0	1.0	103	102	74-126	1	20	
Bromobenzene	mg/kg		1	1.0	1.0	104	102	75-125	2	20	
Bromochloromethane	mg/kg		1	1.1	1.1	107	110	75-128	2	20	
Bromodichloromethane	mg/kg		1	1.1	1.3	111	127	69-130	14	20	
Bromoform	mg/kg		1	1.1	1.4	107	137	64-124	25	20 D6,L0	
Bromomethane	mg/kg		1	1.1	0.96	105	96	54-139	9	20	
Carbon tetrachloride	mg/kg		1	1.0	1.2	102	120	64-139	16	20	
Chlorobenzene	mg/kg		1	1.0	1.0	102	103	75-125	1	20	
Chloroethane	mg/kg		1	1.0	1.1	104	108	45-146	3	20	
Chloroform	mg/kg		1	1.1	1.1	106	110	73-129	4	20	
Chloromethane	mg/kg		1	0.97	0.84	97	84	55-125	14	20	
cis-1,2-Dichloroethene	mg/kg		1	1.1	1.1	105	109	75-126	4	20	
cis-1,3-Dichloropropene	mg/kg		1	1.1	1.1	106	112	70-130	6	20	
Dibromochloromethane	mg/kg		1	1.0	1.3	105	125	69-125	18	20	
Dibromomethane	mg/kg		1	1.1	1.1	107	114	73-125	6	20	
Dichlorodifluoromethane	mg/kg		1	0.86	0.74	86	74	30-137	16	20	
Dichlorofluoromethane	mg/kg		1	1.1	1.2	114	125	30-150	9	20	
Diethyl ether (Ethyl ether)	mg/kg		1	1.1	1.1	111	112	68-131	1	20	
Ethylbenzene	mg/kg		1	0.99	1.0	99	100	74-127	.4	20	
Hexachloro-1,3-butadiene	mg/kg	.5	0.53	0.55	105	110	59-130	4	20		
Isopropylbenzene (Cumene)	mg/kg		1	1.0	1.0	105	105	72-131	.4	20	
Methyl-tert-butyl ether	mg/kg		1	1.1	1.1	110	110	65-132	.3	20	
Methylene Chloride	mg/kg		1	1.1	1.1	106	109	30-150	3	20	
n-Butylbenzene	mg/kg		1	1.0	0.96	101	96	66-134	4	20	
n-Propylbenzene	mg/kg		1	1.0	1.0	101	100	74-131	1	20	
Naphthalene	mg/kg		1	1.2	1.2	116	120	66-130	3	20	
p-Isopropyltoluene	mg/kg		1	1.0	1.0	103	103	65-134	.2	20	
sec-Butylbenzene	mg/kg		1	1.0	1.0	104	101	69-133	3	20	
Styrene	mg/kg		1	1.1	1.0	107	105	75-125	2	20	
tert-Butylbenzene	mg/kg		1	1.0	1.0	105	103	72-129	2	20	

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

LABORATORY CONTROL SAMPLE & LCSD:		1222972		1222973							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Tetrachloroethene	mg/kg	1	1.0	1.0	101	104	68-131	3	20		
Tetrahydrofuran	mg/kg	10	10.5	10.9	105	109	67-131	4	20		
Toluene	mg/kg	1	1.0	1.0	104	103	75-125	1	20		
trans-1,2-Dichloroethene	mg/kg	1	1.0	1.1	104	107	74-129	3	20		
trans-1,3-Dichloropropene	mg/kg	1	1.1	1.2	112	115	72-128	3	20		
Trichloroethene	mg/kg	1	1.0	1.1	102	106	72-125	4	20		
Trichlorofluoromethane	mg/kg	1	1.1	1.2	115	118	41-150	2	20		
Vinyl chloride	mg/kg	1	0.97	0.90	97	90	54-128	7	20		
Xylene (Total)	mg/kg	3	3.0	3.1	101	102	75-126	.5	20		
1,2-Dichloroethane-d4 (S)	%				96	96	49-125				
4-Bromofluorobenzene (S)	%				93	95	53-128				
Dibromofluoromethane (S)	%				95	100	55-127				
Toluene-d8 (S)	%				91	95	56-131				

MATRIX SPIKE SAMPLE:		1222974		10196157001		Spike Conc.		MS Result		MS % Rec		% Rec Limits		Qualifiers	
Parameter	Units	Result	Conc.	ND	1.1	1.3	117	66-135	ND	1.1	1.2	108	65-150	ND	1.1
1,1,1,2-Tetrachloroethane	mg/kg	ND	1.1	1.1	1.1	1.2	108	65-150	ND	1.1	1.2	108	61-140	ND	1.1
1,1,1-Trichloroethane	mg/kg	ND	1.1	1.1	1.1	1.2	108	61-140	ND	1.1	1.2	106	69-132	ND	1.1
1,1,2,2-Tetrachloroethane	mg/kg	ND	1.1	1.1	1.1	1.2	108	60-150	ND	1.1	1.2	111	60-150	ND	1.1
1,1,2-Trichloroethane	mg/kg	ND	1.1	1.1	1.1	1.2	105	64-143	ND	1.1	1.2	105	59-150	ND	1.1
1,1,2-Trichlorotrifluoroethane	mg/kg	ND	1.1	1.1	1.1	1.2	106	63-150	ND	1.1	1.1	100	59-150	ND	1.1
1,1-Dichloroethane	mg/kg	ND	1.1	1.1	1.1	1.2	105	64-143	ND	1.1	1.1	103	63-150	ND	1.1
1,1-Dichloroethene	mg/kg	ND	1.1	1.1	1.1	1.1	100	67-137	ND	1.1	1.1	108	64-135	ND	1.1
1,1-Dichloropropene	mg/kg	ND	1.1	1.1	1.1	1.1	103	68-134	ND	1.1	1.1	114	60-150	ND	1.1
1,2,3-Trichlorobenzene	mg/kg	ND	1.1	1.1	1.1	1.3	116	60-150	ND	1.1	1.2	107	60-150	ND	1.1
1,2,3-Trichloropropane	mg/kg	ND	1.1	1.1	1.1	1.2	108	64-135	ND	1.1	1.1	108	64-135	ND	1.1
1,2,4-Trichlorobenzene	mg/kg	ND	1.1	1.1	1.1	1.3	114	68-134	ND	1.1	1.2	105	66-138	ND	1.1
1,2,4-Trimethylbenzene	mg/kg	ND	1.1	1.1	1.1	1.2	107	60-150	ND	1.1	1.2	109	59-141	ND	1.1
1,2-Dibromo-3-chloropropane	mg/kg	ND	1.1	1.1	1.1	1.5	132	62-133	ND	1.1	1.2	110	65-136	ND	1.1
1,2-Dibromoethane (EDB)	mg/kg	ND	1.1	1.1	1.1	1.2	105	66-138	ND	1.1	1.2	105	66-138	ND	1.1
1,2-Dichlorobenzene	mg/kg	ND	1.1	1.1	1.1	1.2	105	66-138	ND	1.1	1.2	109	59-141	ND	1.1
1,2-Dichloroethane	mg/kg	ND	1.1	1.1	1.1	1.2	108	64-141	ND	1.1	1.2	108	64-141	ND	1.1
1,2-Dichloropropane	mg/kg	ND	1.1	1.1	1.1	1.2	107	65-147	ND	1.1	1.1	103	65-147	ND	1.1
1,3,5-Trimethylbenzene	mg/kg	ND	1.1	1.1	1.1	1.1	103	67-138	ND	1.1	1.2	107	67-138	ND	1.1
1,3-Dichlorobenzene	mg/kg	ND	1.1	1.1	1.1	1.2	107	64-138	ND	1.1	1.2	107	64-138	ND	1.1
1,3-Dichloropropane	mg/kg	ND	1.1	1.1	1.1	1.2	107	60-150	ND	1.1	1.2	107	66-136	ND	1.1
1,4-Dichlorobenzene	mg/kg	ND	1.1	1.1	1.1	1.2	107	66-136	ND	1.1	1.2	109	59-141	ND	1.1
2,2-Dichloropropane	mg/kg	ND	1.1	1.1	0.95	0.95	86	39-150	ND	1.1	1.2	108	64-141	ND	1.1
2-Butanone (MEK)	mg/kg	ND	1.1	1.1	1.1	1.1	96	39-150	ND	1.1	1.2	102	70-141	ND	1.1
2-Chlorotoluene	mg/kg	ND	1.1	1.1	1.1	1.1	106	70-139	ND	1.1	1.2	106	70-139	ND	1.1
4-Chlorotoluene	mg/kg	ND	1.1	1.1	1.1	1.2	103	63-139	ND	1.1	1.1	103	60-150	ND	1.1
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	1.1	1.1	1.0	1.0	93	63-139	ND	1.1	1.1	103	62-144	ND	1.1
Acetone	mg/kg	ND	2.8	2.8	3.0	3.0	108	30-150	ND	1.1	1.1	106	67-140	ND	1.1
Allyl chloride	mg/kg	ND	1.1	1.1	1.1	1.1	103	60-150	ND	1.1	1.1	103	62-144	ND	1.1
Benzene	mg/kg	ND	1.1	1.1	1.1	1.1	103	62-144	ND	1.1	1.2	106	67-140	ND	1.1
Bromobenzene	mg/kg	ND	1.1	1.1	1.2	1.2	106	67-140	ND	1.1	1.2	106	67-140	ND	1.1

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

MATRIX SPIKE SAMPLE: 1222974

Parameter	Units	10196157001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromochloromethane	mg/kg	ND	1.1	1.2	105	69-139	
Bromodichloromethane	mg/kg	ND	1.1	1.4	123	64-138	
Bromoform	mg/kg	ND	1.1	1.3	118	60-134	
Bromomethane	mg/kg	ND	1.1	1.2	104	52-150	
Carbon tetrachloride	mg/kg	ND	1.1	1.2	111	67-150	
Chlorobenzene	mg/kg	ND	1.1	1.2	104	65-139	
Chloroethane	mg/kg	ND	1.1	1.2	111	35-150	
Chloroform	mg/kg	ND	1.1	1.2	108	61-143	
Chloromethane	mg/kg	ND	1.1	0.94	85	44-136	
cis-1,2-Dichloroethene	mg/kg	ND	1.1	1.2	108	68-140	
cis-1,3-Dichloropropene	mg/kg	ND	1.1	1.2	112	60-143	
Dibromochloromethane	mg/kg	ND	1.1	1.3	114	64-134	
Dibromomethane	mg/kg	ND	1.1	1.2	109	65-135	
Dichlorodifluoromethane	mg/kg	ND	1.1	0.88	79	30-150	
Dichlorofluoromethane	mg/kg	ND	1.1	1.3	119	30-150	
Diethyl ether (Ethyl ether)	mg/kg	ND	1.1	1.2	107	58-146	
Ethylbenzene	mg/kg	ND	1.1	1.1	99	65-146	
Hexachloro-1,3-butadiene	mg/kg	ND	.55	0.64	115	60-150	
Isopropylbenzene (Cumene)	mg/kg	ND	1.1	1.2	106	73-143	
Methyl-tert-butyl ether	mg/kg	ND	1.1	1.2	106	57-145	
Methylene Chloride	mg/kg	ND	1.1	1.2	105	30-150	
n-Butylbenzene	mg/kg	ND	1.1	1.1	100	65-150	
n-Propylbenzene	mg/kg	ND	1.1	1.1	100	69-147	
Naphthalene	mg/kg	ND	1.1	1.3	113	60-142	
p-Isopropyltoluene	mg/kg	ND	1.1	1.1	103	65-149	
sec-Butylbenzene	mg/kg	ND	1.1	1.1	102	72-144	
Styrene	mg/kg	ND	1.1	1.2	106	69-138	
tert-Butylbenzene	mg/kg	ND	1.1	1.2	105	68-144	
Tetrachloroethene	mg/kg	ND	1.1	1.1	102	66-147	
Tetrahydrofuran	mg/kg	ND	11.1	11.4	103	59-142	
Toluene	mg/kg	ND	1.1	1.2	104	59-145	
trans-1,2-Dichloroethene	mg/kg	ND	1.1	1.2	104	63-148	
trans-1,3-Dichloropropene	mg/kg	ND	1.1	1.2	111	59-144	
Trichloroethene	mg/kg	ND	1.1	1.2	104	69-141	
Trichlorofluoromethane	mg/kg	ND	1.1	1.4	122	44-150	
Vinyl chloride	mg/kg	ND	1.1	0.96	86	51-144	
Xylene (Total)	mg/kg	ND	3.4	3.4	102	65-146	
1,2-Dichloroethane-d4 (S)	%				99	49-125	
4-Bromofluorobenzene (S)	%				96	53-128	
Dibromofluoromethane (S)	%				99	55-127	
Toluene-d8 (S)	%				93	56-131	

SAMPLE DUPLICATE: 1222975

Parameter	Units	10196168001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	ND		30	
1,1,1-Trichloroethane	mg/kg	ND	ND		30	

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

SAMPLE DUPLICATE: 1222975

Parameter	Units	10196168001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,2,2-Tetrachloroethane	mg/kg	ND	ND		30	
1,1,2-Trichloroethane	mg/kg	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	mg/kg	ND	ND		30	
1,1-Dichloroethane	mg/kg	ND	ND		30	
1,1-Dichloroethene	mg/kg	ND	ND		30	
1,1-Dichloropropene	mg/kg	ND	ND		30	
1,2,3-Trichlorobenzene	mg/kg	ND	ND		30	
1,2,3-Trichloropropane	mg/kg	ND	ND		30	
1,2,4-Trichlorobenzene	mg/kg	ND	ND		30	
1,2,4-Trimethylbenzene	mg/kg	ND	ND		30	
1,2-Dibromo-3-chloropropane	mg/kg	ND	ND		30	
1,2-Dibromoethane (EDB)	mg/kg	ND	ND		30	
1,2-Dichlorobenzene	mg/kg	ND	ND		30	
1,2-Dichloroethane	mg/kg	ND	ND		30	
1,2-Dichloropropane	mg/kg	ND	ND		30	
1,3,5-Trimethylbenzene	mg/kg	ND	ND		30	
1,3-Dichlorobenzene	mg/kg	ND	ND		30	
1,3-Dichloropropane	mg/kg	ND	ND		30	
1,4-Dichlorobenzene	mg/kg	ND	ND		30	
2,2-Dichloropropane	mg/kg	ND	ND		30	
2-Butanone (MEK)	mg/kg	ND	ND		30	
2-Chlorotoluene	mg/kg	ND	ND		30	
4-Chlorotoluene	mg/kg	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	ND		30	
Acetone	mg/kg	ND	ND		30	
Allyl chloride	mg/kg	ND	ND		30	
Benzene	mg/kg	ND	ND		30	
Bromobenzene	mg/kg	ND	ND		30	
Bromochloromethane	mg/kg	ND	ND		30	
Bromodichloromethane	mg/kg	ND	ND		30	
Bromoform	mg/kg	ND	ND		30	
Bromomethane	mg/kg	ND	ND		30	
Carbon tetrachloride	mg/kg	ND	ND		30	
Chlorobenzene	mg/kg	ND	ND		30	
Chloroethane	mg/kg	ND	ND		30	
Chloroform	mg/kg	ND	ND		30	
Chloromethane	mg/kg	ND	ND		30	
cis-1,2-Dichloroethene	mg/kg	ND	ND		30	
cis-1,3-Dichloropropene	mg/kg	ND	ND		30	
Dibromochloromethane	mg/kg	ND	ND		30	
Dibromomethane	mg/kg	ND	ND		30	
Dichlorodifluoromethane	mg/kg	ND	ND		30	
Dichlorofluoromethane	mg/kg	ND	ND		30	
Diethyl ether (Ethyl ether)	mg/kg	ND	ND		30	
Ethylbenzene	mg/kg	ND	ND		30	
Hexachloro-1,3-butadiene	mg/kg	ND	ND		30	
Isopropylbenzene (Cumene)	mg/kg	ND	ND		30	
Methyl-tert-butyl ether	mg/kg	ND	ND		30	

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

SAMPLE DUPLICATE: 1222975

Parameter	Units	10196168001 Result	Dup Result	RPD	Max RPD	Qualifiers
Methylene Chloride	mg/kg	ND	ND		30	
n-Butylbenzene	mg/kg	ND	ND		30	
n-Propylbenzene	mg/kg	ND	ND		30	
Naphthalene	mg/kg	ND	ND		30	
p-Isopropyltoluene	mg/kg	ND	ND		30	
sec-Butylbenzene	mg/kg	ND	ND		30	
Styrene	mg/kg	ND	ND		30	
tert-Butylbenzene	mg/kg	ND	ND		30	
Tetrachloroethene	mg/kg	ND	ND		30	
Tetrahydrofuran	mg/kg	ND	ND		30	
Toluene	mg/kg	ND	ND		30	
trans-1,2-Dichloroethene	mg/kg	ND	ND		30	
trans-1,3-Dichloropropene	mg/kg	ND	ND		30	
Trichloroethene	mg/kg	ND	ND		30	
Trichlorofluoromethane	mg/kg	ND	ND		30	
Vinyl chloride	mg/kg	ND	ND		30	
Xylene (Total)	mg/kg	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	87	90		2	
4-Bromofluorobenzene (S)	%	90	93		3	
Dibromofluoromethane (S)	%	87	92		4	
Toluene-d8 (S)	%	87	90		3	

QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch:	OEXT/18919	Analysis Method:	EPA 8082
QC Batch Method:	EPA 3550	Analysis Description:	8082 GCS PCB
Associated Lab Samples:	10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008		

METHOD BLANK: 1222929 Matrix: Solid

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	mg/kg	ND	0.033	06/25/12 17:03	
PCB-1221 (Aroclor 1221)	mg/kg	ND	0.033	06/25/12 17:03	
PCB-1232 (Aroclor 1232)	mg/kg	ND	0.033	06/25/12 17:03	
PCB-1242 (Aroclor 1242)	mg/kg	ND	0.033	06/25/12 17:03	
PCB-1248 (Aroclor 1248)	mg/kg	ND	0.033	06/25/12 17:03	
PCB-1254 (Aroclor 1254)	mg/kg	ND	0.033	06/25/12 17:03	
PCB-1260 (Aroclor 1260)	mg/kg	ND	0.033	06/25/12 17:03	
PCB-1262 (Aroclor 1262)	mg/kg	ND	0.033	06/25/12 17:03	
PCB-1268 (Aroclor 1268)	mg/kg	ND	0.033	06/25/12 17:03	
Decachlorobiphenyl (S)	%	90	30-150	06/25/12 17:03	
Tetrachloro-m-xylene (S)	%	91	30-150	06/25/12 17:03	

LABORATORY CONTROL SAMPLE: 1222930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	mg/kg	.67	0.64	95	64-125	
PCB-1260 (Aroclor 1260)	mg/kg	.67	0.61	91	64-125	
Decachlorobiphenyl (S)	%			104	30-150	
Tetrachloro-m-xylene (S)	%			97	30-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222931 1222932

Parameter	Units	10195668001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
			Spike Conc.	Conc.	Result	MSD						
PCB-1016 (Aroclor 1016)	mg/kg	ND	1.4	1.5	1.2	1.3	81	91	41-125	12	30	
PCB-1260 (Aroclor 1260)	mg/kg	ND	1.4	1.5	1.1	1.3	73	87	30-150	17	30	
Decachlorobiphenyl (S)	%						80	79	30-150			
Tetrachloro-m-xylene (S)	%						81	83	30-150			

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch:	OEXT/18933	Analysis Method:	EPA 8270
QC Batch Method:	EPA 3550	Analysis Description:	8270 Solid MSSV
Associated Lab Samples:	10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008		

Matrix: Solid

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	mg/kg	ND	0.33	06/26/12 08:55	
1,2-Dichlorobenzene	mg/kg	ND	0.33	06/26/12 08:55	
1,3-Dichlorobenzene	mg/kg	ND	0.33	06/26/12 08:55	
1,4-Dichlorobenzene	mg/kg	ND	0.33	06/26/12 08:55	
2,4,5-Trichlorophenol	mg/kg	ND	1.7	06/26/12 08:55	
2,4,6-Trichlorophenol	mg/kg	ND	0.33	06/26/12 08:55	
2,4-Dichlorophenol	mg/kg	ND	0.33	06/26/12 08:55	
2,4-Dimethylphenol	mg/kg	ND	0.33	06/26/12 08:55	
2,4-Dinitrophenol	mg/kg	ND	1.7	06/26/12 08:55	
2,4-Dinitrotoluene	mg/kg	ND	0.33	06/26/12 08:55	
2,6-Dinitrotoluene	mg/kg	ND	0.33	06/26/12 08:55	
2-Chloronaphthalene	mg/kg	ND	0.33	06/26/12 08:55	
2-Chlorophenol	mg/kg	ND	0.33	06/26/12 08:55	
2-Methylnaphthalene	mg/kg	ND	0.33	06/26/12 08:55	
2-Methylphenol(o-Cresol)	mg/kg	ND	0.33	06/26/12 08:55	
2-Nitroaniline	mg/kg	ND	1.7	06/26/12 08:55	
2-Nitrophenol	mg/kg	ND	0.33	06/26/12 08:55	
3&4-Methylphenol	mg/kg	ND	0.66	06/26/12 08:55	
3,3'-Dichlorobenzidine	mg/kg	ND	0.67	06/26/12 08:55	
3-Nitroaniline	mg/kg	ND	1.7	06/26/12 08:55	
4,6-Dinitro-2-methylphenol	mg/kg	ND	1.7	06/26/12 08:55	
4-Bromophenylphenyl ether	mg/kg	ND	0.33	06/26/12 08:55	
4-Chloro-3-methylphenol	mg/kg	ND	0.33	06/26/12 08:55	
4-Chloroaniline	mg/kg	ND	0.33	06/26/12 08:55	
4-Chlorophenylphenyl ether	mg/kg	ND	0.33	06/26/12 08:55	
4-Nitroaniline	mg/kg	ND	1.7	06/26/12 08:55	
4-Nitrophenol	mg/kg	ND	1.7	06/26/12 08:55	
Acenaphthene	mg/kg	ND	0.33	06/26/12 08:55	
Acenaphthylene	mg/kg	ND	0.33	06/26/12 08:55	
Anthracene	mg/kg	ND	0.33	06/26/12 08:55	
Benzidine	mg/kg	ND	1.6	06/26/12 08:55	CL,SS
Benzo(a)anthracene	mg/kg	ND	0.33	06/26/12 08:55	
Benzo(a)pyrene	mg/kg	ND	0.33	06/26/12 08:55	
Benzo(b)fluoranthene	mg/kg	ND	0.33	06/26/12 08:55	
Benzo(g,h,i)perylene	mg/kg	ND	0.33	06/26/12 08:55	
Benzo(k)fluoranthene	mg/kg	ND	0.33	06/26/12 08:55	
Benzoic acid	mg/kg	ND	1.7	06/26/12 08:55	
Benzyl alcohol	mg/kg	ND	0.66	06/26/12 08:55	
bis(2-Chloroethoxy)methane	mg/kg	ND	0.33	06/26/12 08:55	
bis(2-Chloroethyl) ether	mg/kg	ND	0.33	06/26/12 08:55	
bis(2-Chloroisopropyl) ether	mg/kg	ND	0.33	06/26/12 08:55	

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

METHOD BLANK: 1224304

Matrix: Solid

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007,
10196172008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
bis(2-Ethylhexyl)phthalate	mg/kg	ND	0.33	06/26/12 08:55	
Butylbenzylphthalate	mg/kg	ND	0.33	06/26/12 08:55	
Chrysene	mg/kg	ND	0.33	06/26/12 08:55	
Di-n-butylphthalate	mg/kg	ND	0.33	06/26/12 08:55	
Di-n-octylphthalate	mg/kg	ND	0.33	06/26/12 08:55	
Dibenz(a,h)anthracene	mg/kg	ND	0.33	06/26/12 08:55	
Dibenzofuran	mg/kg	ND	0.33	06/26/12 08:55	
Diethylphthalate	mg/kg	ND	0.33	06/26/12 08:55	
Dimethylphthalate	mg/kg	ND	0.33	06/26/12 08:55	
Fluoranthene	mg/kg	ND	0.33	06/26/12 08:55	
Fluorene	mg/kg	ND	0.33	06/26/12 08:55	
Hexachloro-1,3-butadiene	mg/kg	ND	0.33	06/26/12 08:55	
Hexachlorobenzene	mg/kg	ND	0.33	06/26/12 08:55	
Hexachlorocyclopentadiene	mg/kg	ND	1.7	06/26/12 08:55	
Hexachloroethane	mg/kg	ND	0.33	06/26/12 08:55	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.33	06/26/12 08:55	
Isophorone	mg/kg	ND	0.33	06/26/12 08:55	
N-Nitroso-di-n-propylamine	mg/kg	ND	0.33	06/26/12 08:55	
N-Nitrosodiphenylamine	mg/kg	ND	0.33	06/26/12 08:55	
Naphthalene	mg/kg	ND	0.33	06/26/12 08:55	
Nitrobenzene	mg/kg	ND	0.33	06/26/12 08:55	
Pentachlorophenol	mg/kg	ND	0.67	06/26/12 08:55	
Phenanthren	mg/kg	ND	0.33	06/26/12 08:55	
Phenol	mg/kg	ND	0.33	06/26/12 08:55	
Pyrene	mg/kg	ND	0.33	06/26/12 08:55	
2,4,6-Tribromophenol (S)	%	81	30-150	06/26/12 08:55	
2-Fluorobiphenyl (S)	%	78	30-145	06/26/12 08:55	
2-Fluorophenol (S)	%	80	30-137	06/26/12 08:55	
Nitrobenzene-d5 (S)	%	88	30-141	06/26/12 08:55	
Phenol-d6 (S)	%	81	30-142	06/26/12 08:55	
Terphenyl-d14 (S)	%	88	30-150	06/26/12 08:55	

LABORATORY CONTROL SAMPLE: 1224305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	mg/kg	1.7	1.1	66	51-125	
1,2-Dichlorobenzene	mg/kg	1.7	1.1	67	53-125	
1,3-Dichlorobenzene	mg/kg	1.7	1.1	64	53-125	
1,4-Dichlorobenzene	mg/kg	1.7	1.1	67	53-125	
2,4,5-Trichlorophenol	mg/kg	1.7	1.3J	79	67-125	
2,4,6-Trichlorophenol	mg/kg	1.7	1.3	79	64-125	
2,4-Dichlorophenol	mg/kg	1.7	1.3	77	60-125	
2,4-Dimethylphenol	mg/kg	1.7	1.3	79	56-125	
2,4-Dinitrophenol	mg/kg	1.7	1.2J	71	30-125	

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

LABORATORY CONTROL SAMPLE: 1224305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	mg/kg	1.7	1.4	85	60-125	
2,6-Dinitrotoluene	mg/kg	1.7	1.3	80	62-125	
2-Chloronaphthalene	mg/kg	1.7	1.3	75	62-125	
2-Chlorophenol	mg/kg	1.7	1.2	72	51-125	
2-Methylnaphthalene	mg/kg	1.7	1.2	74	58-125	
2-Methylphenol(o-Cresol)	mg/kg	1.7	1.1	69	52-125	
2-Nitroaniline	mg/kg	1.7	1.5J	90	64-125 CH	
2-Nitrophenol	mg/kg	1.7	1.2	74	53-125	
3&4-Methylphenol	mg/kg	1.7	1.2	74	54-125	
3,3'-Dichlorobenzidine	mg/kg	1.7	1.4	85	49-125	
3-Nitroaniline	mg/kg	1.7	1.2J	74	51-125	
4,6-Dinitro-2-methylphenol	mg/kg	1.7	1.3J	77	30-127	
4-Bromophenylphenyl ether	mg/kg	1.7	1.3	78	64-125	
4-Chloro-3-methylphenol	mg/kg	1.7	1.3	79	61-125	
4-Chloroaniline	mg/kg	1.7	0.86	51	39-125	
4-Chlorophenylphenyl ether	mg/kg	1.7	1.2	74	62-125	
4-Nitroaniline	mg/kg	1.7	1.3J	77	59-125	
4-Nitrophenol	mg/kg	1.7	1.5J	87	57-125 CH	
Acenaphthene	mg/kg	1.7	1.3	75	61-125	
Acenaphthylene	mg/kg	1.7	1.3	76	64-125	
Anthracene	mg/kg	1.7	1.3	79	64-125	
Benzidine	mg/kg	1.7	ND	19	30-125 CL,L0,SS	
Benzo(a)anthracene	mg/kg	1.7	1.3	80	62-125	
Benzo(a)pyrene	mg/kg	1.7	1.3	80	62-125	
Benzo(b)fluoranthene	mg/kg	1.7	1.3	78	62-125	
Benzo(g,h,i)perylene	mg/kg	1.7	1.4	85	62-125	
Benzo(k)fluoranthene	mg/kg	1.7	1.3	79	65-125	
Benzoic acid	mg/kg	1.7	1.2J	74	31-125	
Benzyl alcohol	mg/kg	1.7	1.2	74	46-125	
bis(2-Chloroethoxy)methane	mg/kg	1.7	1.2	71	54-125	
bis(2-Chloroethyl) ether	mg/kg	1.7	1.1	68	45-125	
bis(2-Chloroisopropyl) ether	mg/kg	1.7	0.95	57	42-125	
bis(2-Ethylhexyl)phthalate	mg/kg	1.7	1.6	95	63-125	
Butylbenzylphthalate	mg/kg	1.7	1.5	91	62-125	
Chrysene	mg/kg	1.7	1.3	80	63-125	
Di-n-butylphthalate	mg/kg	1.7	1.5	90	66-125	
Di-n-octylphthalate	mg/kg	1.7	1.5	93	64-125 CH	
Dibenz(a,h)anthracene	mg/kg	1.7	1.4	84	63-125	
Dibenzofuran	mg/kg	1.7	1.3	76	64-125	
Diethylphthalate	mg/kg	1.7	1.4	85	63-125	
Dimethylphthalate	mg/kg	1.7	1.3	80	63-125	
Fluoranthene	mg/kg	1.7	1.3	81	64-125	
Fluorene	mg/kg	1.7	1.3	77	61-125	
Hexachloro-1,3-butadiene	mg/kg	1.7	1.2	70	48-125	
Hexachlorobenzene	mg/kg	1.7	1.3	78	64-125	
Hexachlorocyclopentadiene	mg/kg	1.7	1.1J	64	30-125	
Hexachloroethane	mg/kg	1.7	1.2	74	41-125	
Indeno(1,2,3-cd)pyrene	mg/kg	1.7	1.4	83	63-125	

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

LABORATORY CONTROL SAMPLE: 1224305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Isophorone	mg/kg	1.7	1.3	78	55-125	
N-Nitroso-di-n-propylamine	mg/kg	1.7	1.2	72	50-125	
N-Nitrosodiphenylamine	mg/kg	1.7	1.3	80	65-125	
Naphthalene	mg/kg	1.7	1.2	70	49-125	
Nitrobenzene	mg/kg	1.7	1.2	72	53-125	
Pentachlorophenol	mg/kg	1.7	1.3	78	40-125	
Phenanthrrene	mg/kg	1.7	1.3	79	63-125	
Phenol	mg/kg	1.7	1.2	70	49-125	
Pyrene	mg/kg	1.7	1.3	78	64-125	
2,4,6-Tribromophenol (S)	%			96	30-150	
2-Fluorobiphenyl (S)	%			85	30-145	
2-Fluorophenol (S)	%			75	30-137	
Nitrobenzene-d5 (S)	%			87	30-141	
Phenol-d6 (S)	%			81	30-142	
Terphenyl-d14 (S)	%			89	30-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1224306 1224307

Parameter	Units	MS Spike		MSD Spike		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10196172001	Conc.	Conc.	Result								
1,2,4-Trichlorobenzene	mg/kg	ND	2	2	1.2	1.3	65	67	48-125	4	30		
1,2-Dichlorobenzene	mg/kg	ND	2	2	1.3	1.1	66	60	41-125	11	30		
1,3-Dichlorobenzene	mg/kg	ND	2	2	1.2	1.1	64	60	39-125	7	30		
1,4-Dichlorobenzene	mg/kg	ND	2	2	1.2	1.1	63	60	40-125	4	30		
2,4,5-Trichlorophenol	mg/kg	ND	2	2	1.4J	1.6J	75	82	63-125		30		
2,4,6-Trichlorophenol	mg/kg	ND	2	2	1.5	1.5	80	81	59-125	.4	30		
2,4-Dichlorophenol	mg/kg	ND	2	2	1.4	1.4	73	73	60-125	.2	30		
2,4-Dimethylphenol	mg/kg	ND	2	2	1.5	1.4	76	74	52-125	2	30		
2,4-Dinitrophenol	mg/kg	ND	2	2	.84J	.93J	44	49	30-125		30		
2,4-Dinitrotoluene	mg/kg	ND	2	2	1.5	1.7	80	87	57-125	7	30		
2,6-Dinitrotoluene	mg/kg	ND	2	2	1.4	1.5	75	81	60-125	8	30		
2-Chloronaphthalene	mg/kg	ND	2	2	1.4	1.5	72	76	59-125	5	30		
2-Chlorophenol	mg/kg	ND	2	2	1.3	1.3	67	69	48-125	2	30		
2-Methylnaphthalene	mg/kg	ND	2	2	1.4	1.4	72	71	58-125	.8	30		
2-Methylphenol(o-Cresol)	mg/kg	ND	2	2	1.3	1.3	68	67	49-125	1	30		
2-Nitroaniline	mg/kg	ND	2	2	1.7J	1.8J	90	95	61-125		30 CH		
2-Nitrophenol	mg/kg	ND	2	2	1.4	1.3	73	70	47-125	4	30		
3&4-Methylphenol	mg/kg	ND	2	2	1.3	1.3	68	69	52-125	2	30		
3,3'-Dichlorobenzidine	mg/kg	ND	2	2	1.5	1.4	77	75	30-131	2	30		
3-Nitroaniline	mg/kg	ND	2	2	1.4J	1.4J	72	72	42-125		30		
4,6-Dinitro-2-methylphenol	mg/kg	ND	2	2	1.2J	1.2J	61	62	30-135		30		
4-Bromophenylphenyl ether	mg/kg	ND	2	2	1.4	1.4	71	75	62-125	5	30		
4-Chloro-3-methylphenol	mg/kg	ND	2	2	1.5	1.4	78	75	61-125	4	30		
4-Chloroaniline	mg/kg	ND	2	2	1.1	0.99	55	52	30-125	6	30		
4-Chlorophenylphenyl ether	mg/kg	ND	2	2	1.4	1.4	74	75	60-125	2	30		
4-Nitroaniline	mg/kg	ND	2	2	1.4J	1.4J	75	75	47-125		30		
4-Nitrophenol	mg/kg	ND	2	2	1.6J	1.8J	84	95	30-139		30 CH		

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

Parameter	Units	10196172001		MSD		MSD		MSD		% Rec		Max		
		Result	Spike Conc.	Spike Conc.	Result	MSD	Result	% Rec	MSD	% Rec	Limits	RPD	RPD	Qual
Acenaphthene	mg/kg	ND	2	2	1.4	1.4	72	75	59-125	5	30			
Acenaphthylene	mg/kg	ND	2	2	1.4	1.5	76	80	60-125	5	30			
Anthracene	mg/kg	ND	2	2	1.5	1.5	77	77	63-125	.9	30			
Benzidine	mg/kg	ND	2	2	ND	ND	0	0	30-125			30	CL,M0, SS	
Benzo(a)anthracene	mg/kg	ND	2	2	1.6	1.7	81	87	60-125	6	30			
Benzo(a)pyrene	mg/kg	ND	2	2	1.6	1.8	80	90	60-125	12	30			
Benzo(b)fluoranthene	mg/kg	ND	2	2	1.6	1.8	84	96	58-125	14	30			
Benzo(g,h,i)perylene	mg/kg	ND	2	2	1.6	1.8	86	96	30-141	10	30			
Benzo(k)fluoranthene	mg/kg	ND	2	2	1.6	1.7	82	91	62-125	10	30			
Benzoic acid	mg/kg	ND	2	2	.93J	1J	49	55	30-125			30		
Benzyl alcohol	mg/kg	ND	2	2	1.4	1.4	71	71	30-131	.4	30			
bis(2-Chloroethoxy)methane	mg/kg	ND	2	2	1.3	1.2	66	64	54-125	3	30			
bis(2-Chloroethyl) ether	mg/kg	ND	2	2	1.2	1.1	64	60	39-125	7	30			
bis(2-Chloroisopropyl) ether	mg/kg	ND	2	2	1.1	1.1	57	55	40-125	4	30			
bis(2-Ethylhexyl)phthalate	mg/kg	ND	2	2	1.7	1.7	90	88	57-125	2	30			
Butylbenzylphthalate	mg/kg	ND	2	2	1.6	1.6	85	84	57-125	.9	30			
Chrysene	mg/kg	ND	2	2	1.6	1.7	79	86	61-125	7	30			
Di-n-butylphthalate	mg/kg	ND	2	2	1.6	1.7	86	87	66-125	.2	30			
Di-n-octylphthalate	mg/kg	ND	2	2	1.7	1.7	88	87	62-125	1	30	CH		
Dibenz(a,h)anthracene	mg/kg	ND	2	2	1.6	1.6	82	86	60-125	4	30			
Dibenzofuran	mg/kg	ND	2	2	1.4	1.4	74	75	59-125	2	30			
Diethylphthalate	mg/kg	ND	2	2	1.6	1.6	84	85	62-125	.9	30			
Dimethylphthalate	mg/kg	ND	2	2	1.5	1.5	79	81	62-125	3	30			
Fluoranthene	mg/kg	ND	2	2	1.7	2.0	82	100	58-125	18	30			
Fluorene	mg/kg	ND	2	2	1.4	1.5	74	77	61-125	3	30			
Hexachloro-1,3-butadiene	mg/kg	ND	2	2	1.3	1.2	68	65	42-125	4	30			
Hexachlorobenzene	mg/kg	ND	2	2	1.4	1.4	72	72	60-125	.02	30			
Hexachlorocyclopentadiene	mg/kg	ND	2	2	ND	ND	46	37	30-125			30		
Hexachloroethane	mg/kg	ND	2	2	1.3	1.2	69	65	34-125	7	30			
Indeno(1,2,3-cd)pyrene	mg/kg	ND	2	2	1.6	1.8	86	93	61-125	8	30			
Isophorone	mg/kg	ND	2	2	1.4	1.4	73	71	50-125	3	30			
N-Nitroso-di-n-propylamine	mg/kg	ND	2	2	1.3	1.2	67	64	49-125	4	30			
N-Nitrosodiphenylamine	mg/kg	ND	2	2	1.4	1.4	75	75	64-125	.5	30			
Naphthalene	mg/kg	ND	2	2	1.3	1.3	69	66	47-125	4	30			
Nitrobenzene	mg/kg	ND	2	2	1.4	1.4	74	72	45-125	2	30			
Pentachlorophenol	mg/kg	ND	2	2	1.4	1.4	71	72	30-140	1	30			
Phenanthrene	mg/kg	ND	2	2	1.5	1.5	77	80	56-125	4	30			
Phenol	mg/kg	ND	2	2	1.3	1.2	67	64	49-125	5	30			
Pyrene	mg/kg	ND	2	2	1.6	1.9	78	92	56-125	15	30			
2,4,6-Tribromophenol (S)	%						91	93	30-150					
2-Fluorobiphenyl (S)	%						81	85	30-145					
2-Fluorophenol (S)	%						70	71	30-137					
Nitrobenzene-d5 (S)	%						83	85	30-141					
Phenol-d6 (S)	%						74	76	30-142					
Terphenyl-d14 (S)	%						81	84	30-150					

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QUALITY CONTROL DATA

Project: MCES 120761 REV

Pace Project No.: 10196172

QC Batch: OEXT/18920 Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008

METHOD BLANK: 1223019 Matrix: Solid

Associated Lab Samples: 10196172001, 10196172002, 10196172003, 10196172004, 10196172005, 10196172006, 10196172007, 10196172008

Parameter	Units	Blank Result	Reporting Limit		Analyzed	Qualifiers
			Limit	Analyzed		
Diesel Range Organics	mg/kg	ND	10.0	06/22/12 15:50		
n-Triacontane (S)	%	87	50-150	06/22/12 15:50		

LABORATORY CONTROL SAMPLE & LCSD: 1223020 1223021

Parameter	Units	Spike Conc.	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max RPD	Qualifiers
			Result	Result	% Rec	% Rec				
Diesel Range Organics	mg/kg	80	58.6	70.4	73	88	70-120	18	20	
n-Triacontane (S)	%				89	95	50-150			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: MCES 120761 REV

Pace Project No.: 10196172

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

- CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
- CL The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
- D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- D4 Sample was diluted due to the presence of high levels of target analytes.
- D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
- L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
- L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.
- S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
- S4 Surrogate recovery not evaluated against control limits due to sample dilution.
- S5 Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).
- SS This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.
- T6 High boiling point hydrocarbons are present in the sample.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MCES 120761 REV

Pace Project No.: 10196172

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10196172001	MC-04-2.5	EPA 3550	OEXT/18919	EPA 8082	GCSV/9741
10196172002	MC-04-08	EPA 3550	OEXT/18919	EPA 8082	GCSV/9741
10196172003	MC-03-02	EPA 3550	OEXT/18919	EPA 8082	GCSV/9741
10196172004	MC-03-07	EPA 3550	OEXT/18919	EPA 8082	GCSV/9741
10196172005	MC-08-04	EPA 3550	OEXT/18919	EPA 8082	GCSV/9741
10196172006	MC-08-7.5	EPA 3550	OEXT/18919	EPA 8082	GCSV/9741
10196172007	MC-01-04	EPA 3550	OEXT/18919	EPA 8082	GCSV/9741
10196172008	MC-01-10	EPA 3550	OEXT/18919	EPA 8082	GCSV/9741
10196172001	MC-04-2.5	WI MOD DRO	OEXT/18920	WI MOD DRO	GCSV/9724
10196172002	MC-04-08	WI MOD DRO	OEXT/18920	WI MOD DRO	GCSV/9724
10196172003	MC-03-02	WI MOD DRO	OEXT/18920	WI MOD DRO	GCSV/9724
10196172004	MC-03-07	WI MOD DRO	OEXT/18920	WI MOD DRO	GCSV/9724
10196172005	MC-08-04	WI MOD DRO	OEXT/18920	WI MOD DRO	GCSV/9724
10196172006	MC-08-7.5	WI MOD DRO	OEXT/18920	WI MOD DRO	GCSV/9724
10196172007	MC-01-04	WI MOD DRO	OEXT/18920	WI MOD DRO	GCSV/9724
10196172008	MC-01-10	WI MOD DRO	OEXT/18920	WI MOD DRO	GCSV/9724
10196172001	MC-04-2.5	TPH GRO/PVOC WI ext.	GCV/9427	WI MOD GRO	GCV/9433
10196172002	MC-04-08	TPH GRO/PVOC WI ext.	GCV/9427	WI MOD GRO	GCV/9433
10196172003	MC-03-02	TPH GRO/PVOC WI ext.	GCV/9427	WI MOD GRO	GCV/9433
10196172004	MC-03-07	TPH GRO/PVOC WI ext.	GCV/9427	WI MOD GRO	GCV/9433
10196172005	MC-08-04	TPH GRO/PVOC WI ext.	GCV/9427	WI MOD GRO	GCV/9433
10196172006	MC-08-7.5	TPH GRO/PVOC WI ext.	GCV/9427	WI MOD GRO	GCV/9433
10196172007	MC-01-04	TPH GRO/PVOC WI ext.	GCV/9427	WI MOD GRO	GCV/9433
10196172008	MC-01-10	TPH GRO/PVOC WI ext.	GCV/9427	WI MOD GRO	GCV/9433
10196172001	MC-04-2.5	EPA 3050	MPRP/33133	EPA 6010	ICP/13681
10196172002	MC-04-08	EPA 3050	MPRP/33133	EPA 6010	ICP/13681
10196172003	MC-03-02	EPA 3050	MPRP/33133	EPA 6010	ICP/13681
10196172004	MC-03-07	EPA 3050	MPRP/33133	EPA 6010	ICP/13681
10196172005	MC-08-04	EPA 3050	MPRP/33133	EPA 6010	ICP/13681
10196172006	MC-08-7.5	EPA 3050	MPRP/33133	EPA 6010	ICP/13681
10196172007	MC-01-04	EPA 3050	MPRP/33133	EPA 6010	ICP/13681
10196172008	MC-01-10	EPA 3050	MPRP/33133	EPA 6010	ICP/13681
10196172001	MC-04-2.5	EPA 3010	MPRP/33674	EPA 6010	ICP/13824
10196172001	MC-04-2.5	EPA 3050	MPRP/33651	EPA 6020	ICPM/13187
10196172001	MC-04-2.5	EPA 7471	MERP/7016	EPA 7471	MERC/7806
10196172002	MC-04-08	EPA 7471	MERP/7016	EPA 7471	MERC/7806
10196172003	MC-03-02	EPA 7471	MERP/7016	EPA 7471	MERC/7806
10196172004	MC-03-07	EPA 7471	MERP/7016	EPA 7471	MERC/7806
10196172005	MC-08-04	EPA 7471	MERP/7016	EPA 7471	MERC/7806
10196172006	MC-08-7.5	EPA 7471	MERP/7016	EPA 7471	MERC/7806
10196172007	MC-01-04	EPA 7471	MERP/7016	EPA 7471	MERC/7806
10196172008	MC-01-10	EPA 7471	MERP/7016	EPA 7471	MERC/7806
10196172001	MC-04-2.5	ASTM D2974	MPRP/33134		
10196172002	MC-04-08	ASTM D2974	MPRP/33134		
10196172003	MC-03-02	ASTM D2974	MPRP/33134		

Date: 07/19/2012 11:40 AM

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MCES 120761 REV

Pace Project No.: 10196172

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10196172004	MC-03-07	ASTM D2974	MPRP/33139		
10196172005	MC-08-04	ASTM D2974	MPRP/33139		
10196172006	MC-08-7.5	ASTM D2974	MPRP/33139		
10196172007	MC-01-04	ASTM D2974	MPRP/33139		
10196172008	MC-01-10	ASTM D2974	MPRP/33139		
10196172001	MC-04-2.5	EPA 3550	OEXT/18933	EPA 8270	MSSV/8232
10196172002	MC-04-08	EPA 3550	OEXT/18933	EPA 8270	MSSV/8232
10196172003	MC-03-02	EPA 3550	OEXT/18933	EPA 8270	MSSV/8232
10196172004	MC-03-07	EPA 3550	OEXT/18933	EPA 8270	MSSV/8232
10196172005	MC-08-04	EPA 3550	OEXT/18933	EPA 8270	MSSV/8232
10196172006	MC-08-7.5	EPA 3550	OEXT/18933	EPA 8270	MSSV/8232
10196172007	MC-01-04	EPA 3550	OEXT/18933	EPA 8270	MSSV/8232
10196172008	MC-01-10	EPA 3550	OEXT/18933	EPA 8270	MSSV/8232
10196172001	MC-04-2.5	EPA 5035/5030B	MSV/20539	EPA 8260	MSV/20540
10196172002	MC-04-08	EPA 5035/5030B	MSV/20539	EPA 8260	MSV/20540
10196172003	MC-03-02	EPA 5035/5030B	MSV/20539	EPA 8260	MSV/20540
10196172004	MC-03-07	EPA 5035/5030B	MSV/20539	EPA 8260	MSV/20540
10196172005	MC-08-04	EPA 5035/5030B	MSV/20539	EPA 8260	MSV/20540
10196172006	MC-08-7.5	EPA 5035/5030B	MSV/20539	EPA 8260	MSV/20540
10196172007	MC-01-04	EPA 5035/5030B	MSV/20539	EPA 8260	MSV/20540
10196172008	MC-01-10	EPA 5035/5030B	MSV/20539	EPA 8260	MSV/20540
10196172009	TRIP BLANK	EPA 5035/5030B	MSV/20539	EPA 8260	MSV/20540

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17560.d Page 1
Report Date: 25-Jun-2012 10:13

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WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17560.d
Lab Smp Id: 10196172007 Client Smp ID: 10196172007
Inj Date : 24-JUN-2012 07:53
Operator : KT1 Inst ID: 10gcv3.i
Smp Info : 10196172007
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 25-Jun-2012 10:12 10gcv3.i Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: SEMIVOLGCMS

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added(
Cpnd	Variable	Local Compound Variable

CONCENTRATIONS

Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN	FINAL
					(ug/L)	(mg/Kg)
S 5 GRO	2.250-13.750			6910231	659.981	33.00

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17560.d

Report Date: 06/25/2012

Sample ID: 10196172007

Client ID: 10196172007

Instrument: 10gcv3.i

ANDI G1-17560.d

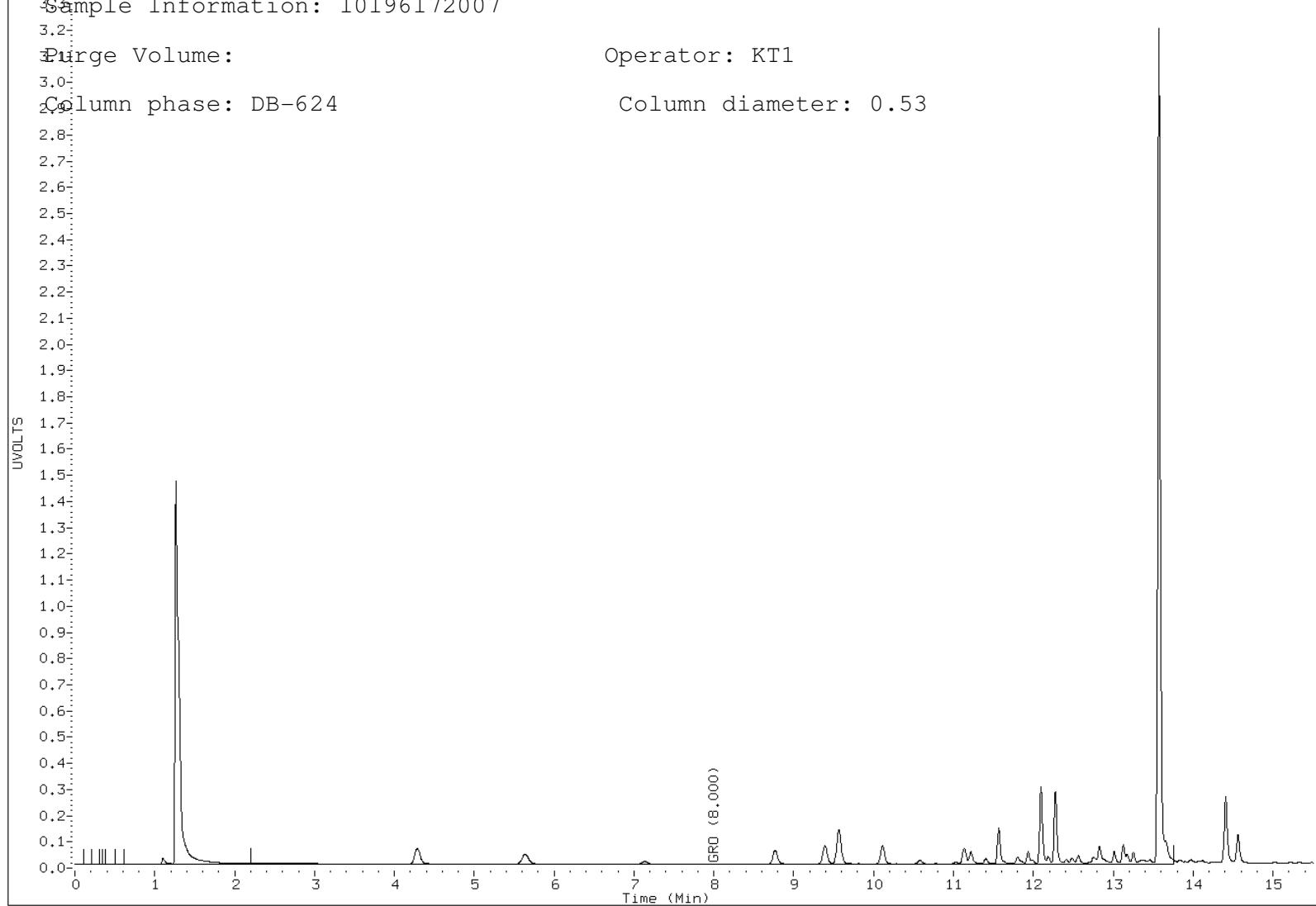
Sample Information: 10196172007

Purge Volume:

Operator: KT1

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17557.d Page 1
Report Date: 25-Jun-2012 10:13

Pace Analytical Services

WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17557.d
Lab Smp Id: 10196172004 Client Smp ID: 10196172004
Inj Date : 24-JUN-2012 06:54
Operator : KT1 Inst ID: 10gcv3.i
Smp Info : 10196172004
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 25-Jun-2012 10:12 10gcv3.i Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: SEMIVOLGCMS

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

Cpnd	Variable	Local Compound Variable
DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added (

CONCENTRATIONS

							ON-COLUMN	FINAL
Compounds		RT	EXP RT	DLT	RT	RESPONSE	(ug/L)	(mg/Kg)
=====		====	=====	=====	====	=====	=====	=====
S 5 GRO						Compound Not Detected.		

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17557.d

Report Date: 06/25/2012

Sample ID: 10196172004

Client ID: 10196172004

Instrument: 10gcv3.i

ANDI G1-17557.d

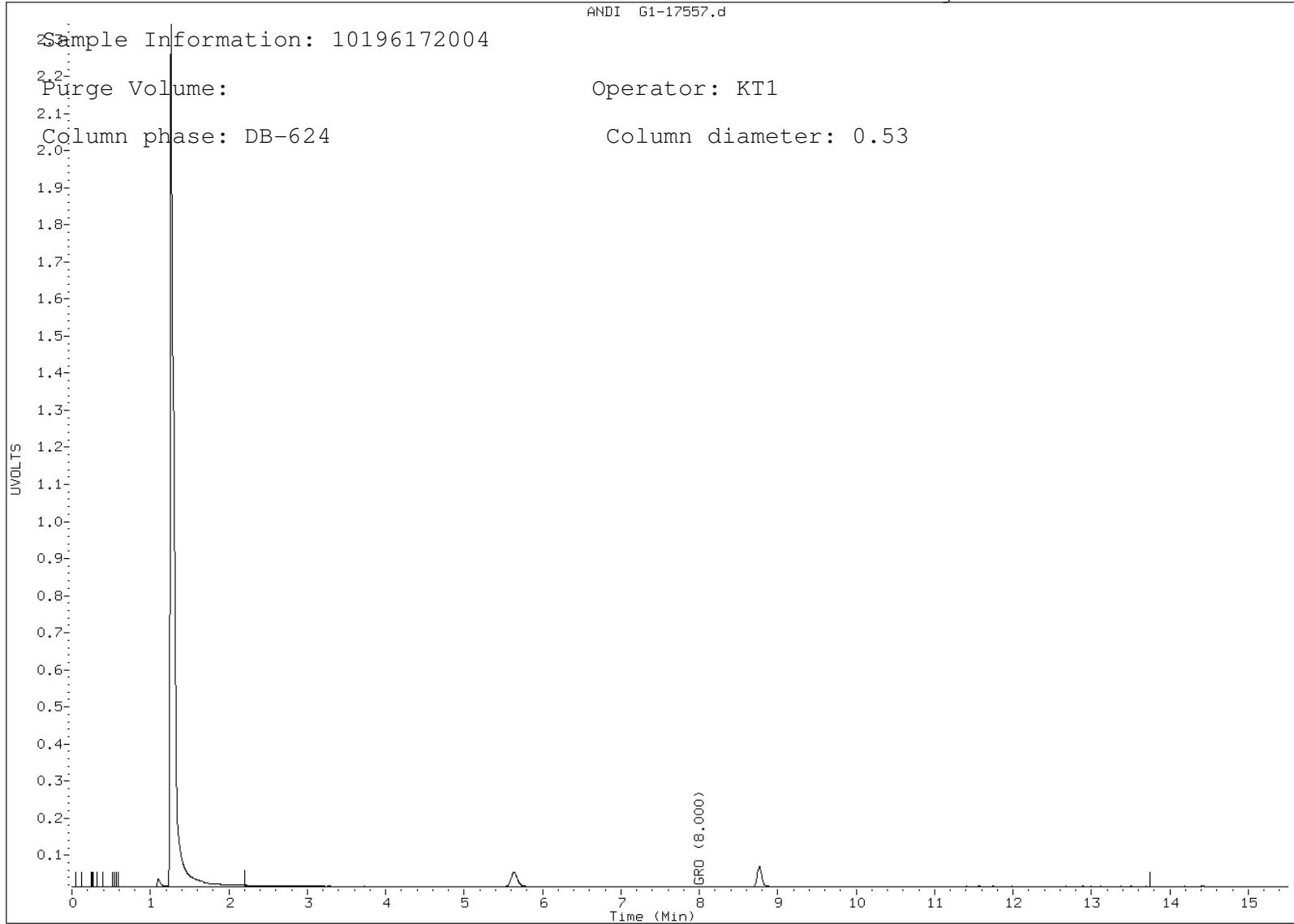
Sample Information: 10196172004

Purge Volume:

Operator: KT1

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17559.d Page 1
Report Date: 25-Jun-2012 10:13

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WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17559.d
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Inj Date : 24-JUN-2012 07:33
Operator : KT1 Inst ID: 10gcv3.i
Smp Info : 10196172006
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 25-Jun-2012 10:12 10gcv3.i Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: SEMIVOLGCMS

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

Cpnd	Variable	Local Compound Variable
DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added (

CONCENTRATIONS

ON-COLUMN FINAL

Compounds RT EXP RT DLT RT RESPONSE (ug/L) (mg/Kg)

===== ===== ===== ===== ===== ===== ===== =====

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17559.d

Report Date: 06/25/2012

Sample ID: 10196172006

Client ID: 10196172006

Instrument: 10gcv3.i

ANDI G1-17559.d

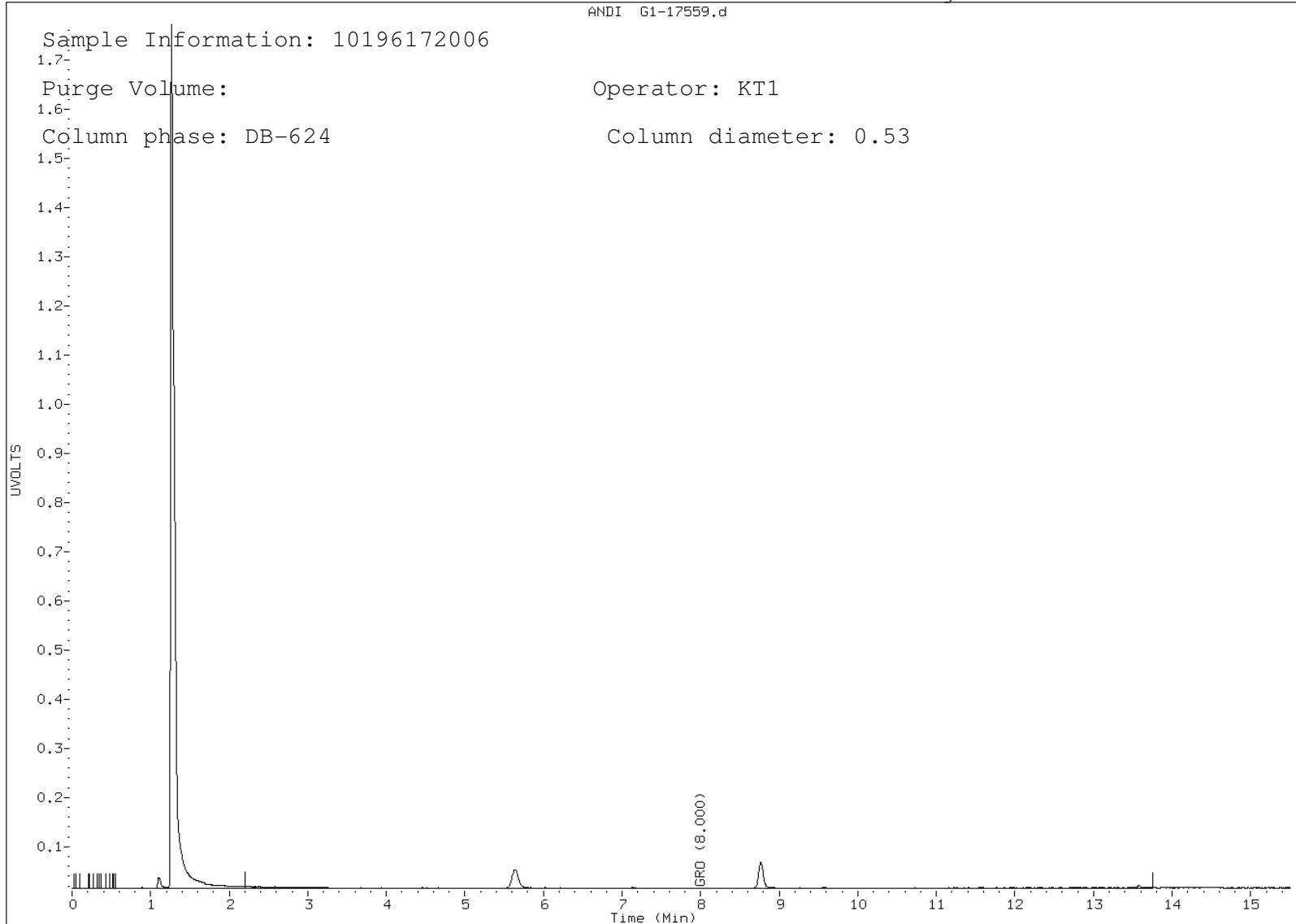
Sample Information: 10196172006

Purge Volume:

Column phase: DB-624

Operator: KT1

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17558.d Page 1
Report Date: 25-Jun-2012 10:13

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WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17558.d
Lab Smp Id: 10196172005 Client Smp ID: 10196172005
Inj Date : 24-JUN-2012 07:14
Operator : KT1 Inst ID: 10gcv3.i
Smp Info : 10196172005
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 25-Jun-2012 10:12 10gcv3.i Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: SEMIVOLGCMS

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

Cpnd	Variable	Local Compound Variable
DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added (

CONCENTRATIONS

ON-COLUMN FINAL

Compounds RT EXP RT DLT RT RESPONSE (ug/L) (mg/Kg)

=====
=====

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17558.d

Report Date: 06/25/2012

Sample ID: 10196172005

Client ID: 10196172005

Instrument: 10gcv3.i

ANDI G1-17558.d

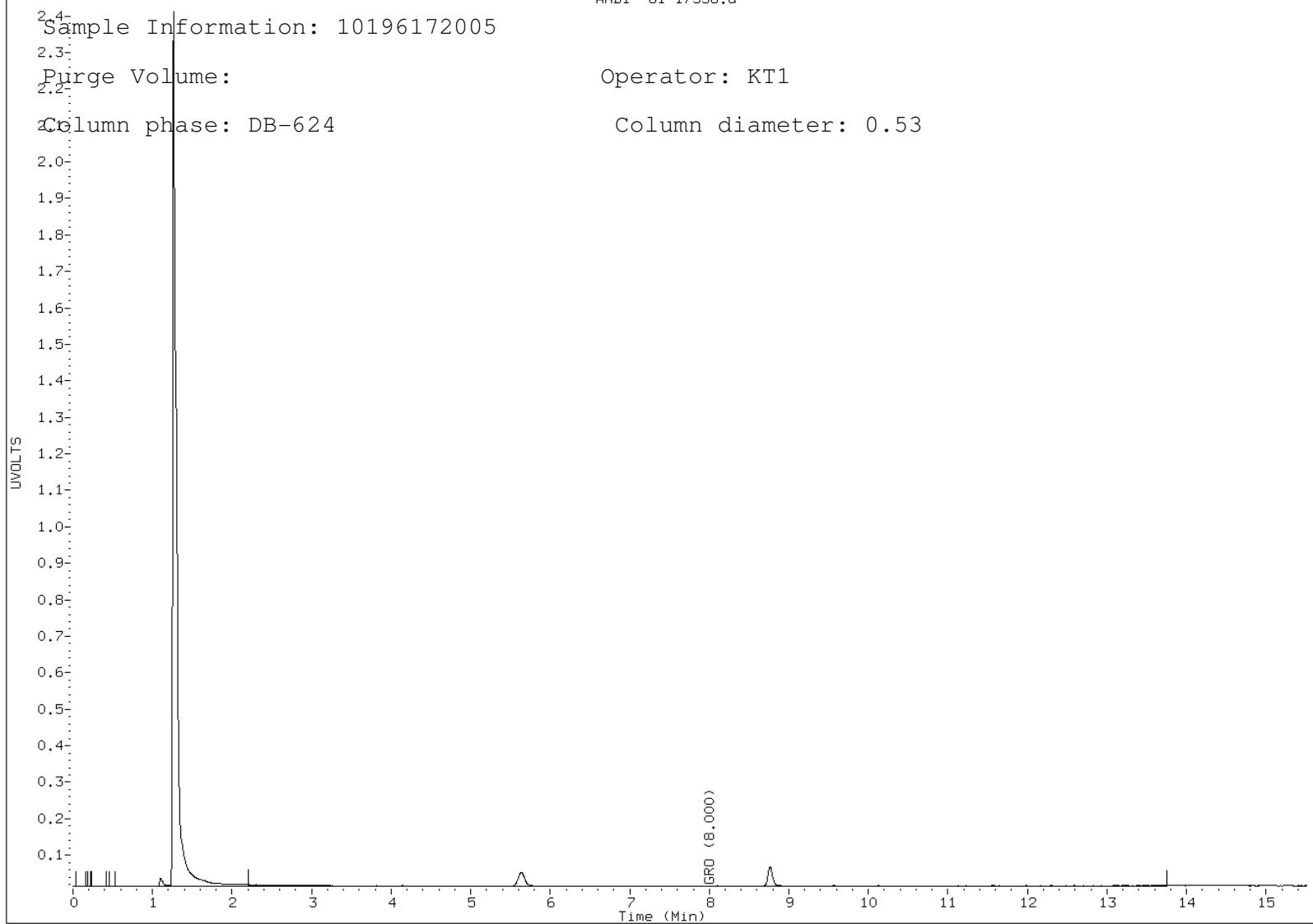
Sample Information: 10196172005

Purge Volume:

Operator: KT1

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17555.d Page 1
Report Date: 25-Jun-2012 10:13

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WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17555.d
Lab Smp Id: 10196172002 Client Smp ID: 10196172002
Inj Date : 24-JUN-2012 06:15
Operator : KT1 Inst ID: 10gcv3.i
Smp Info : 10196172002
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 25-Jun-2012 10:12 10gcv3.i Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: SEMIVOLGCMS

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added(
Cpnd	Variable	Local Compound Variable

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(mg/Kg)
=====	=====	=====	=====	=====	=====	=====
S 5 GRO				Compound Not Detected.		

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17555.d

Report Date: 06/25/2012

Sample ID: 10196172002

Client ID: 10196172002

Instrument: 10gcv3.i

ANDI G1-17555.d

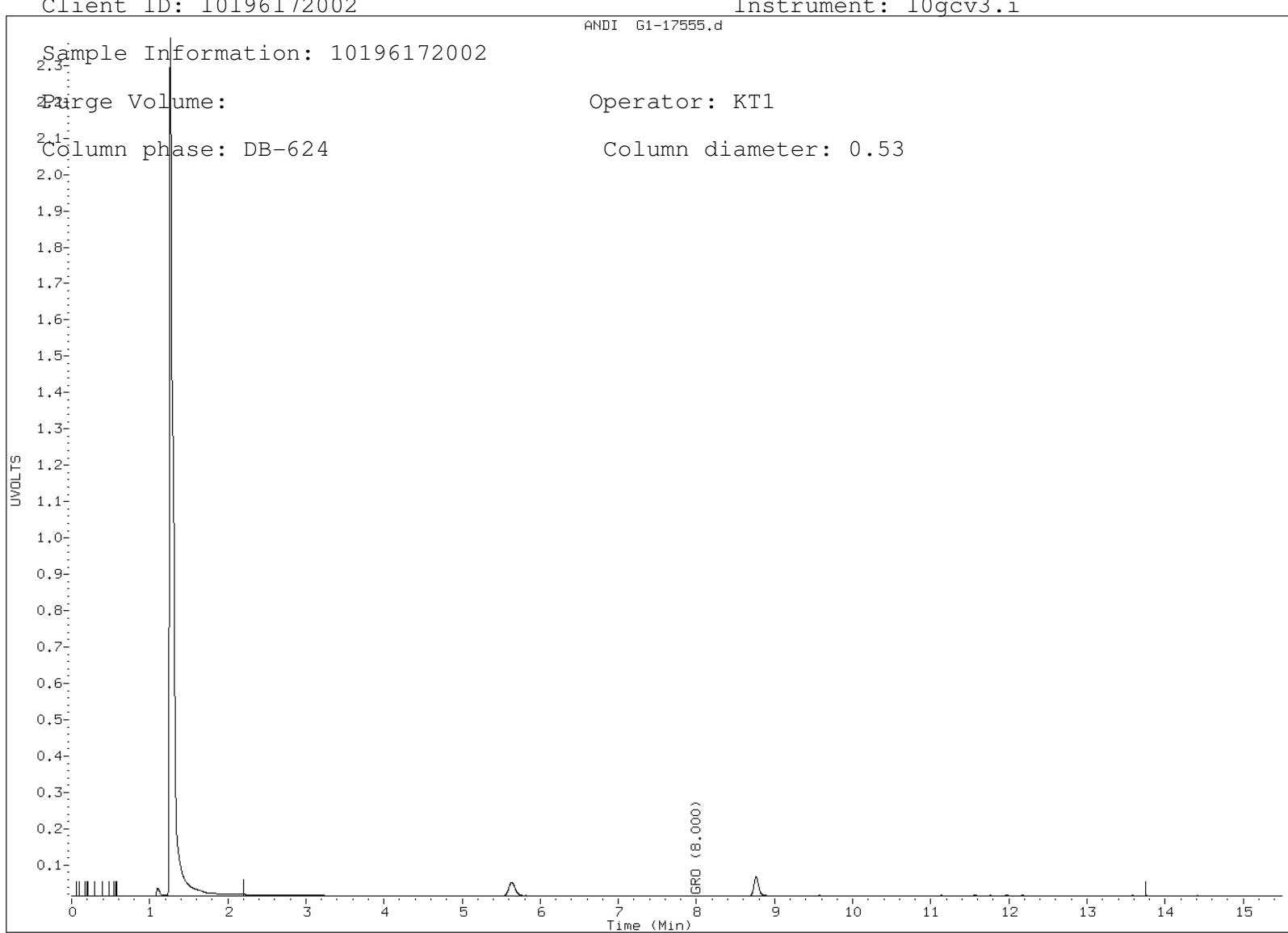
Sample Information: 10196172002

Purge Volume:

Operator: KT1

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17554.d Page 1
Report Date: 25-Jun-2012 10:13

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WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17554.d
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Inj Date : 24-JUN-2012 05:56
Operator : KT1 Inst ID: 10gcv3.i
Smp Info : 10196172001
Misc Info : 9433
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Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 25-Jun-2012 10:12 10gcv3.i Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: SEMIVOLGCMS

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

Cpnd	Variable	Local Compound Variable
DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added (

CONCENTRATIONS

							ON-COLUMN	FINAL
Compounds		RT	EXP RT	DLT	RT	RESPONSE	(ug/L)	(mg/Kg)
=====		====	=====	=====	====	=====	=====	=====
S 5 GRO						Compound Not Detected.		

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17554.d

Report Date: 06/25/2012

Sample ID: 10196172001

Client ID: 10196172001

Instrument: 10gcv3.i

ANDI G1-17554.d

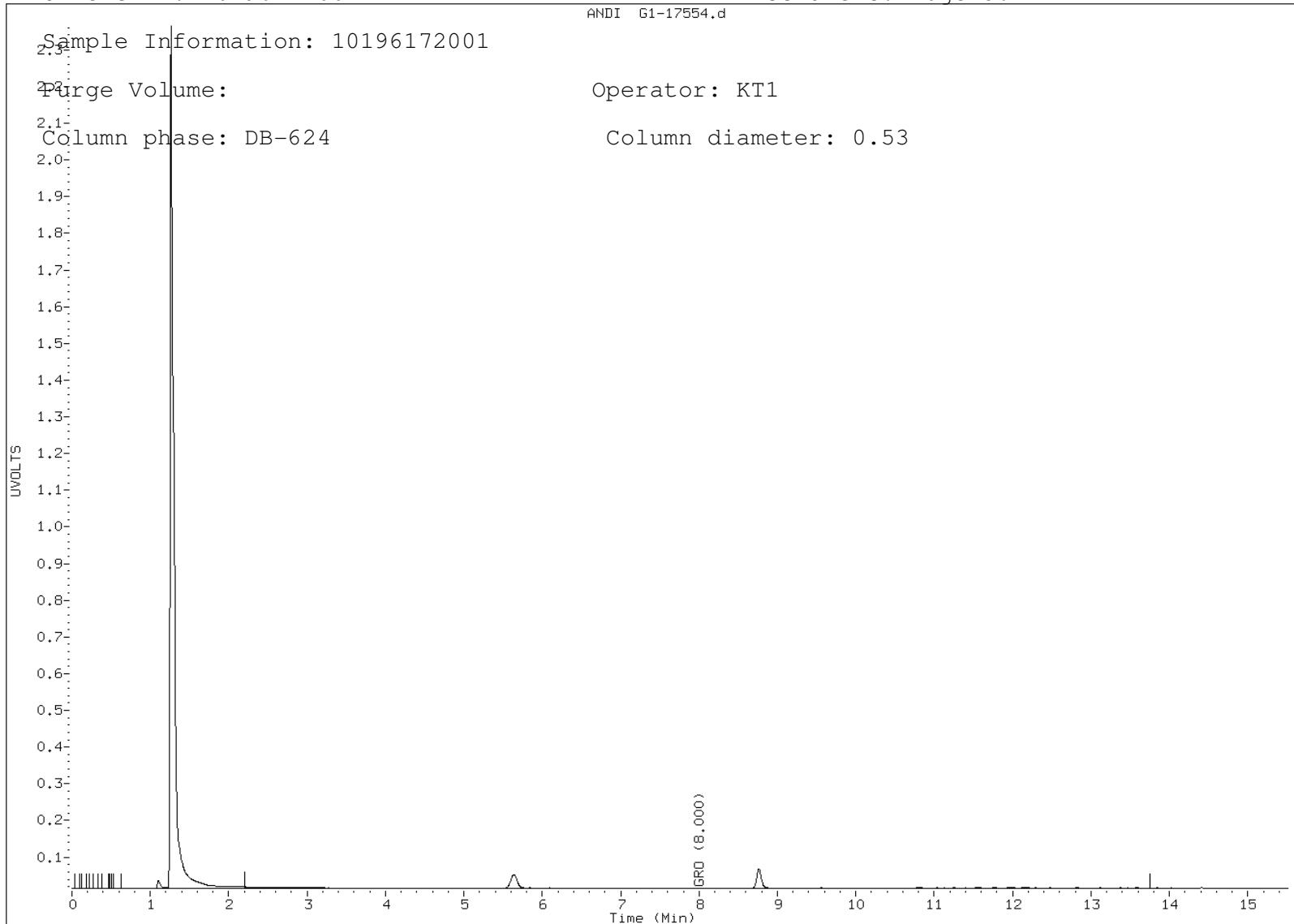
Sample Information: 10196172001

Purge Volume:

Operator: KT1

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17556.d Page 1
Report Date: 25-Jun-2012 10:13

Pace Analytical Services

WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17556.d
Lab Smp Id: 10196172003 Client Smp ID: 10196172003
Inj Date : 24-JUN-2012 06:35
Operator : KT1 Inst ID: 10gcv3.i
Smp Info : 10196172003
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 25-Jun-2012 10:12 10gcv3.i Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: SEMIVOLGCMS

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added(
Cpnd	Variable	Local Compound Variable

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(mg/Kg)
=====	=====	=====	=====	=====	=====	=====
S 5 GRO				Compound Not Detected.		

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17556.d

Report Date: 06/25/2012

Sample ID: 10196172003

Client ID: 10196172003

Instrument: 10gcv3.i

ANDI G1-17556.d

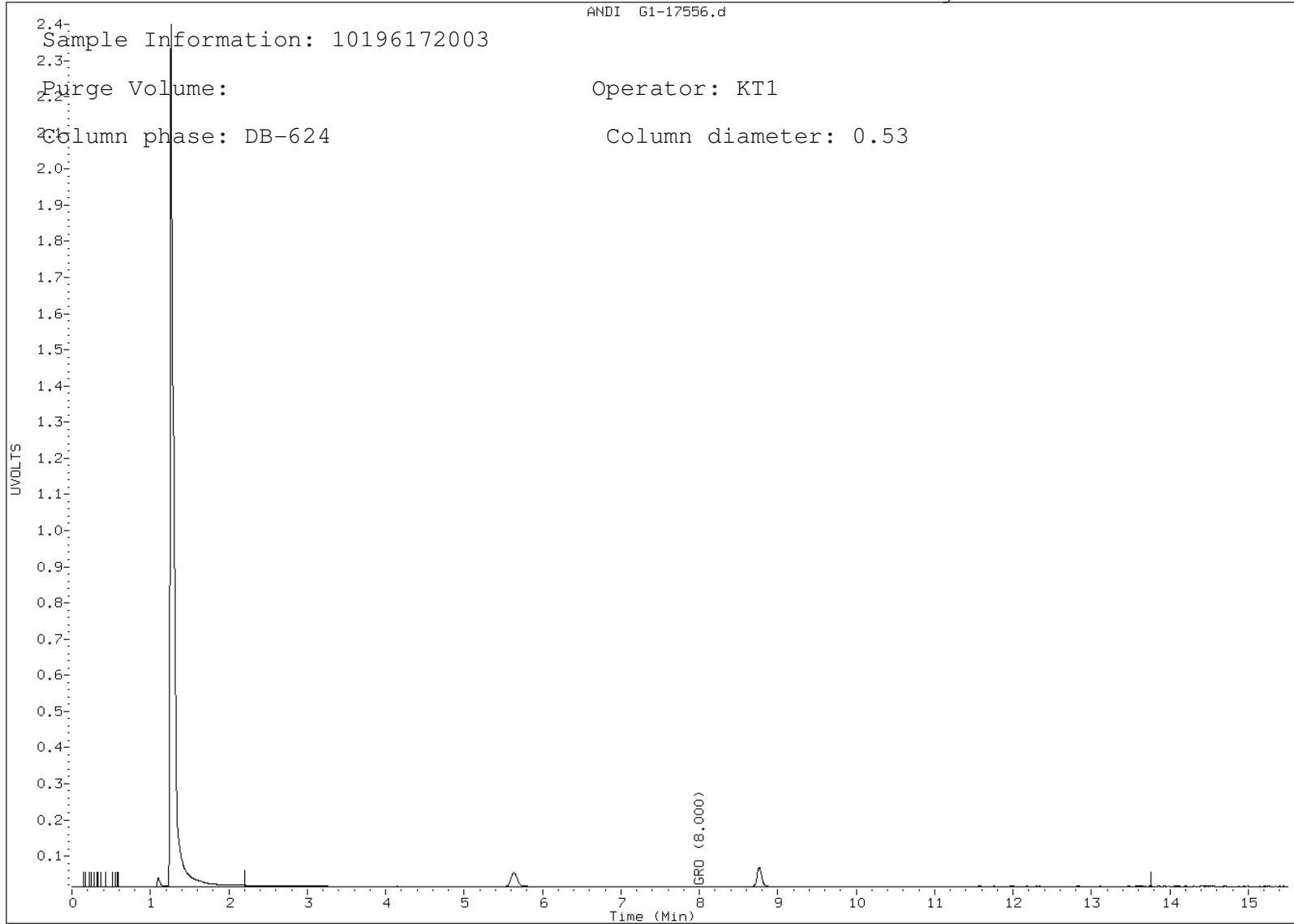
Sample Information: 10196172003

Purge Volume:

Operator: KT1

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17557.d Page 1
Report Date: 24-Jun-2012 20:26

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WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17557.d
Lab Smp Id: 10196172004 Client Smp ID: 10196172004
Inj Date : 24-JUN-2012 06:54
Operator : MJH Inst ID: 10gcv3.i
Smp Info : 10196172004
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 24-Jun-2012 13:43 mheckman Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

Cpnd	Variable	Local Compound Variable
DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added (

CONCENTRATIONS

							ON-COLUMN	FINAL
Compounds		RT	EXP RT	DLT	RT	RESPONSE	(ug/L)	(mg/Kg)
=====		====	=====	=====	====	=====	=====	=====
S 5 GRO						Compound Not Detected.		

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17557.d

Report Date: 06/24/2012

Sample ID: 10196172004

Client ID: 10196172004

Instrument: 10gcv3.i

ANDI G1-17557.d

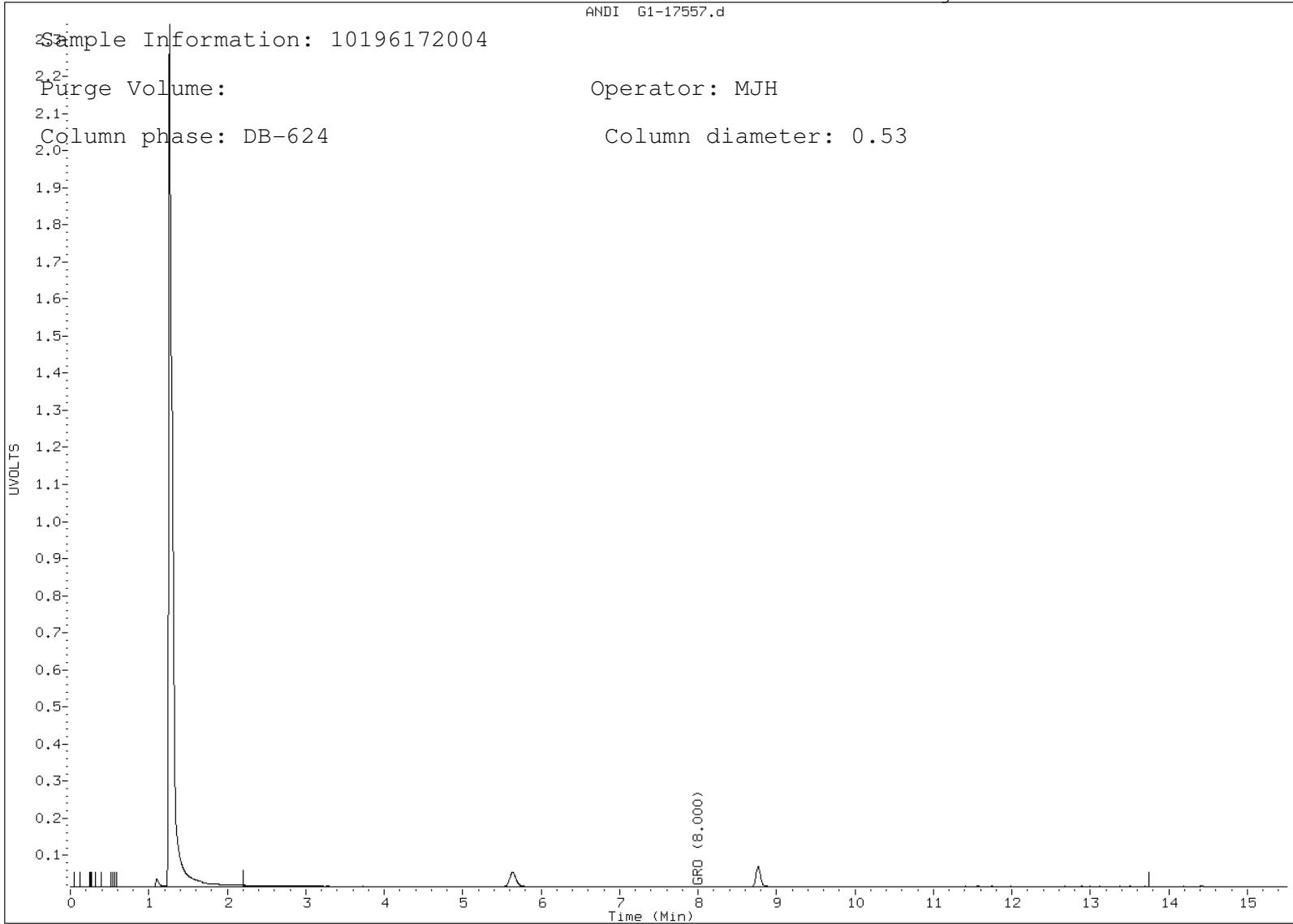
Sample Information: 10196172004

Purge Volume:

Operator: MJH

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17558.d Page 1
Report Date: 24-Jun-2012 20:26

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WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17558.d
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Inj Date : 24-JUN-2012 07:14
Operator : MJH Inst ID: 10gcv3.i
Smp Info : 10196172005
Misc Info : 9433
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Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 24-Jun-2012 13:43 mheckman Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

Cpnd	Variable	Local Compound Variable
DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added (

CONCENTRATIONS

							ON-COLUMN	FINAL
Compounds		RT	EXP RT	DLT	RT	RESPONSE	(ug/L)	(mg/Kg)
=====		====	=====	=====	====	=====	=====	=====
S 5 GRO						Compound Not Detected.		

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17558.d

Report Date: 06/24/2012

Sample ID: 10196172005

Client ID: 10196172005

Instrument: 10gcv3.i

ANDI G1-17558.d

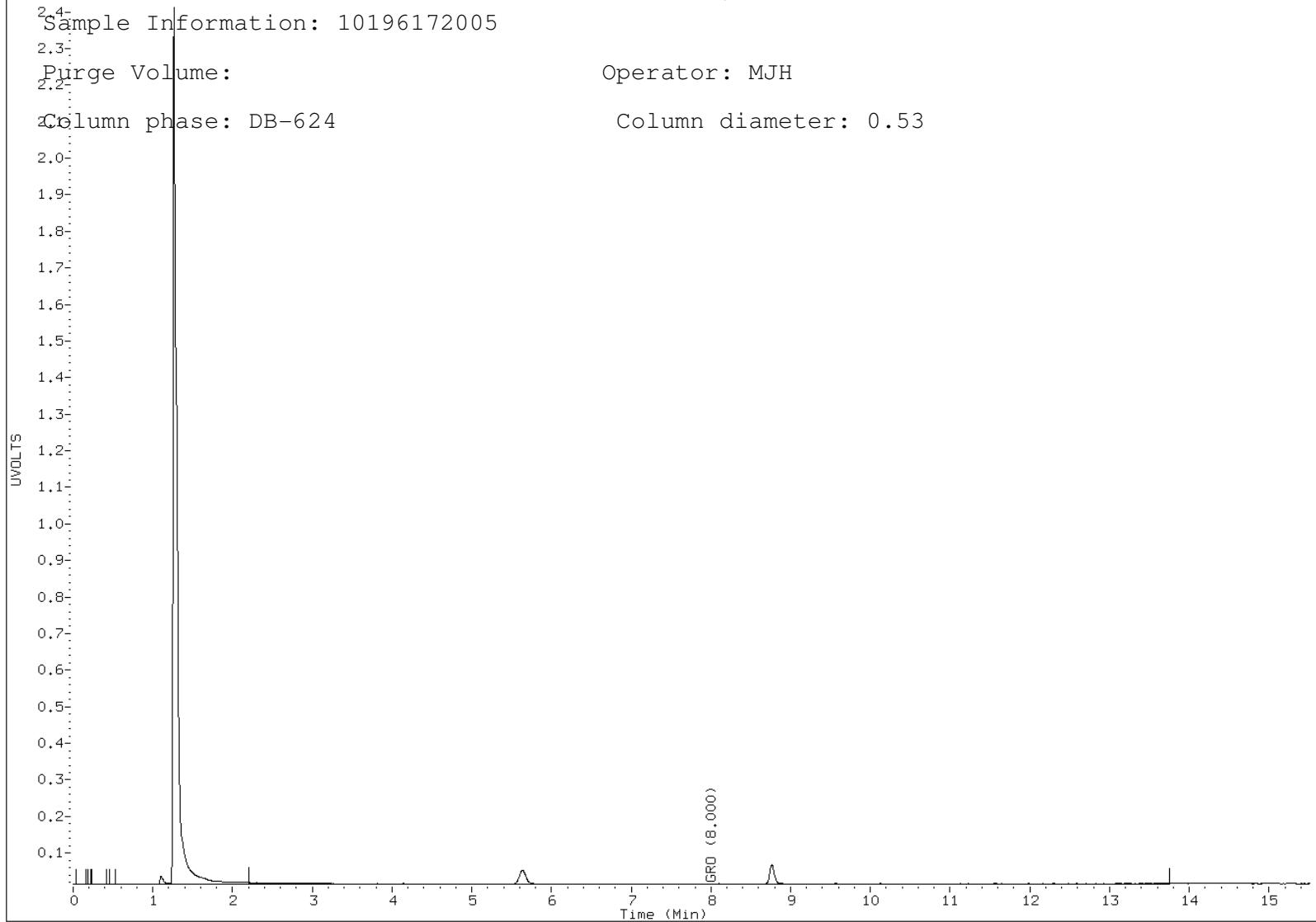
Sample Information: 10196172005

Purge Volume:

Operator: MJH

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17559.d Page 1
Report Date: 24-Jun-2012 20:26

Pace Analytical Services

WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17559.d
Lab Smp Id: 10196172006 Client Smp ID: 10196172006
Inj Date : 24-JUN-2012 07:33
Operator : MJH Inst ID: 10gcv3.i
Smp Info : 10196172006
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 24-Jun-2012 13:43 mheckman Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added(
Cpnd	Variable	Local Compound Variable

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(mg/Kg)
=====	=====	=====	=====	=====	=====	=====
S 5 GRO				Compound Not Detected.		

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17559.d

Report Date: 06/24/2012

Sample ID: 10196172006

Client ID: 10196172006

Instrument: 10gcv3.i

ANDI G1-17559.d

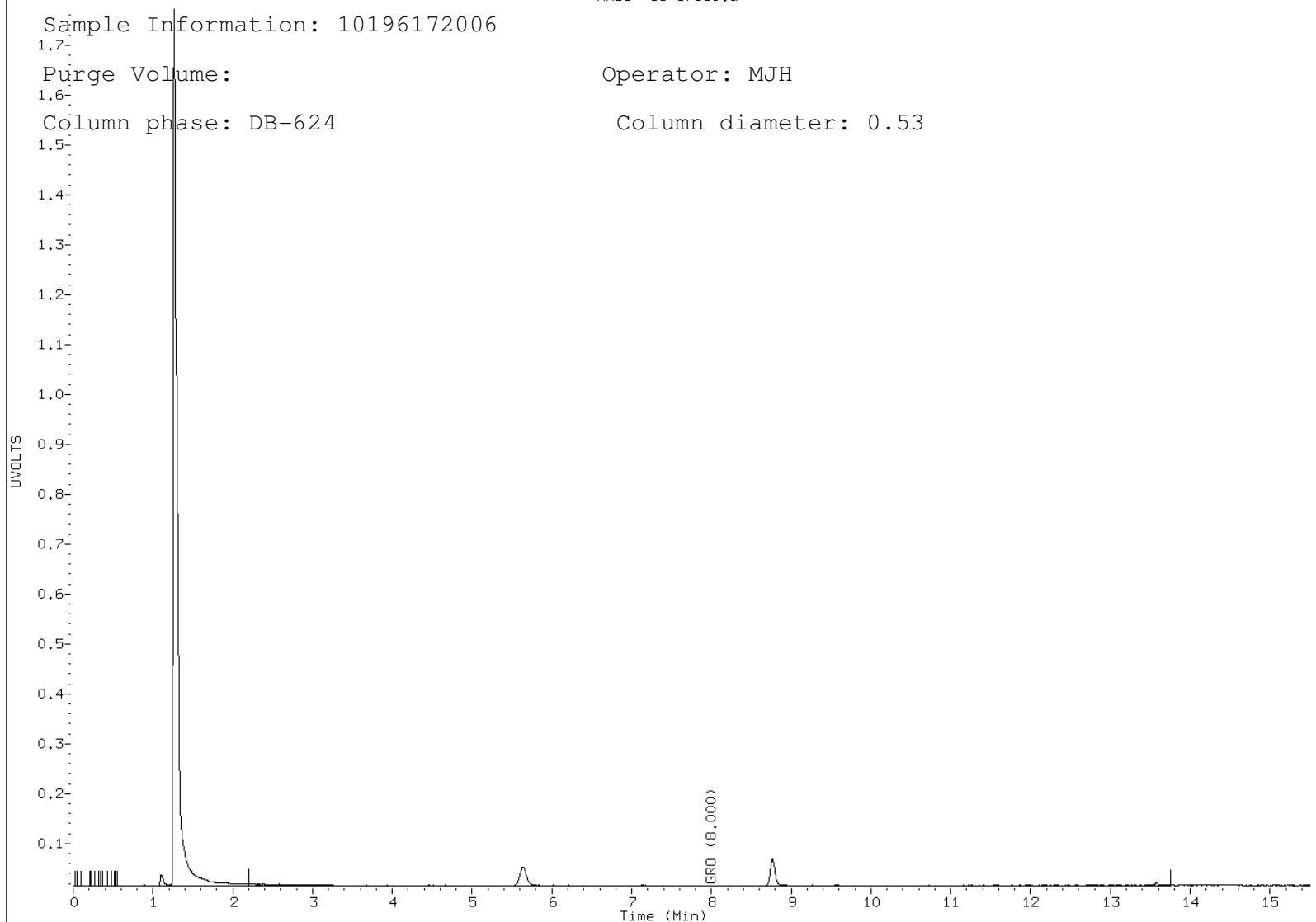
Sample Information: 10196172006

Purge Volume:

Column phase: DB-624

Operator: MJH

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17560.d Page 1
Report Date: 24-Jun-2012 20:26

Pace Analytical Services

WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17560.d
Lab Smp Id: 10196172007 Client Smp ID: 10196172007
Inj Date : 24-JUN-2012 07:53
Operator : MJH Inst ID: 10gcv3.i
Smp Info : 10196172007
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 24-Jun-2012 13:43 mheckman Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added(
Cpnd	Variable	Local Compound Variable

CONCENTRATIONS

Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN	FINAL
					(ug/L)	(mg/Kg)
S 5 GRO	2.250-13.750			6910231	659.981	33.00

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17560.d

Report Date: 06/24/2012

Sample ID: 10196172007

Client ID: 10196172007

Instrument: 10gcv3.i

ANDI G1-17560.d

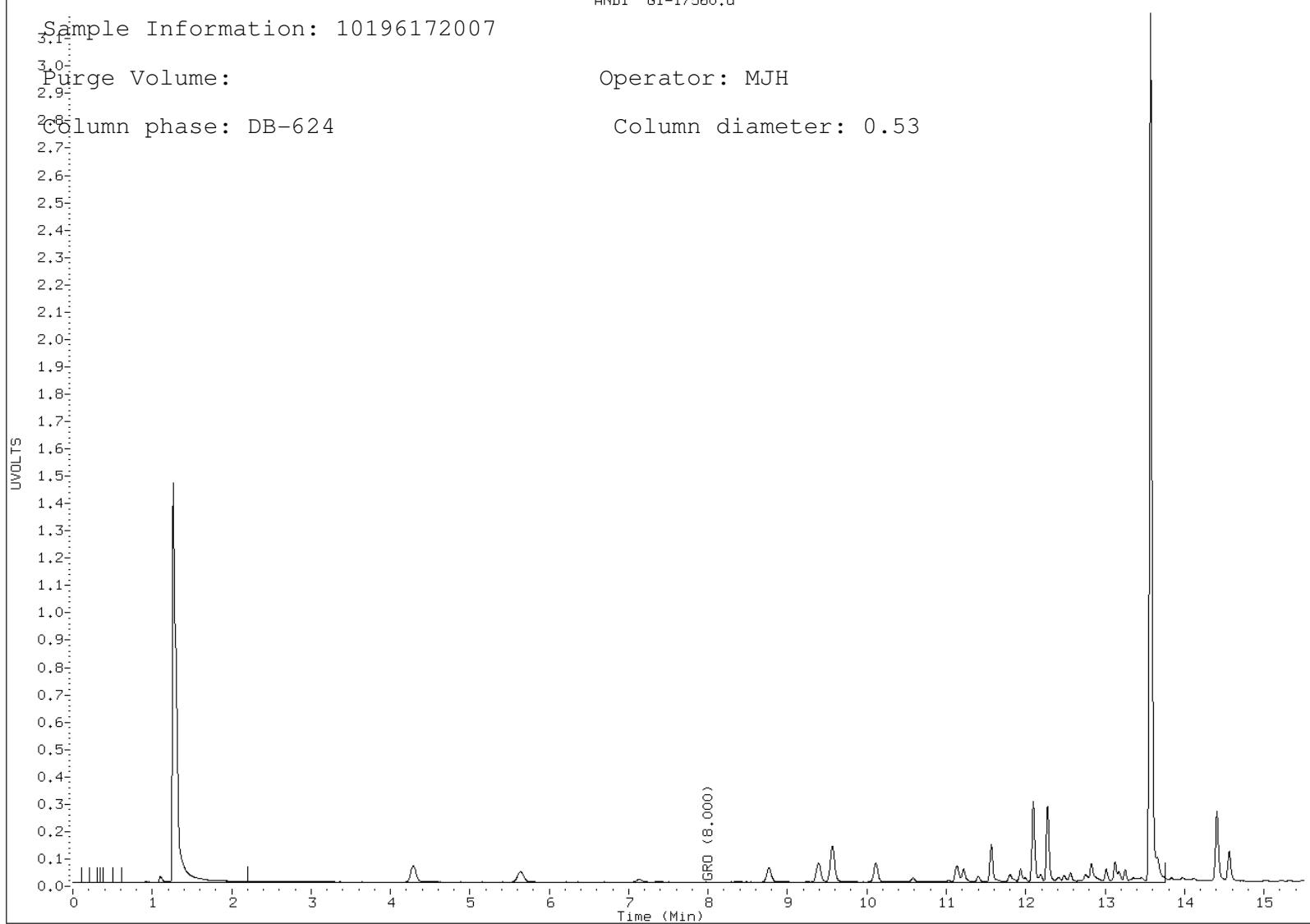
Sample Information: 10196172007

Purge Volume:

Operator: MJH

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17556.d Page 1
Report Date: 24-Jun-2012 20:26

Pace Analytical Services

WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17556.d
Lab Smp Id: 10196172003 Client Smp ID: 10196172003
Inj Date : 24-JUN-2012 06:35
Operator : MJH Inst ID: 10gcv3.i
Smp Info : 10196172003
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 24-Jun-2012 13:43 mheckman Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

Cpnd	Variable	Local Compound Variable
DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added (

CONCENTRATIONS

							ON-COLUMN	FINAL
Compounds		RT	EXP RT	DLT	RT	RESPONSE	(ug/L)	(mg/Kg)
=====		====	=====	=====	====	=====	=====	=====
S 5 GRO						Compound Not Detected.		

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17556.d

Report Date: 06/24/2012

Sample ID: 10196172003

Client ID: 10196172003

Instrument: 10gcv3.i

ANDI G1-17556.d

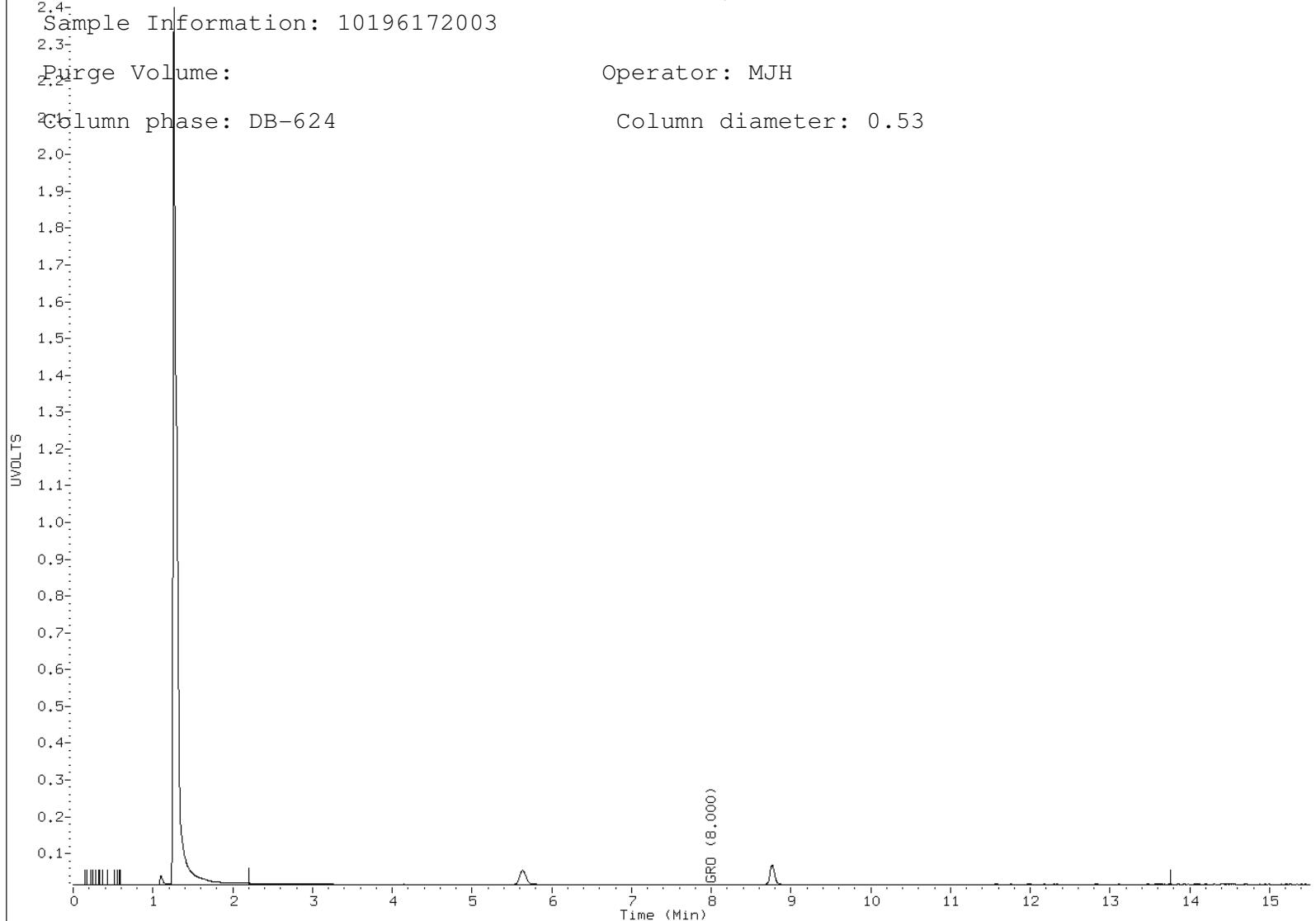
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Sample Information: 10196172003

Purge Volume:

Operator: MJH

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17554.d Page 1
Report Date: 24-Jun-2012 20:26

Pace Analytical Services

WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17554.d
Lab Smp Id: 10196172001 Client Smp ID: 10196172001
Inj Date : 24-JUN-2012 05:56
Operator : MJH Inst ID: 10gcv3.i
Smp Info : 10196172001
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 24-Jun-2012 13:43 mheckman Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

Cpnd	Variable	Local Compound Variable
DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added (

CONCENTRATIONS

							ON-COLUMN	FINAL
Compounds		RT	EXP RT	DLT	RT	RESPONSE	(ug/L)	(mg/Kg)
=====		====	=====	=====	====	=====	=====	=====
S 5 GRO						Compound Not Detected.		

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17554.d

Report Date: 06/24/2012

Sample ID: 10196172001

Client ID: 10196172001

Instrument: 10gcv3.i

ANDI G1-17554.d

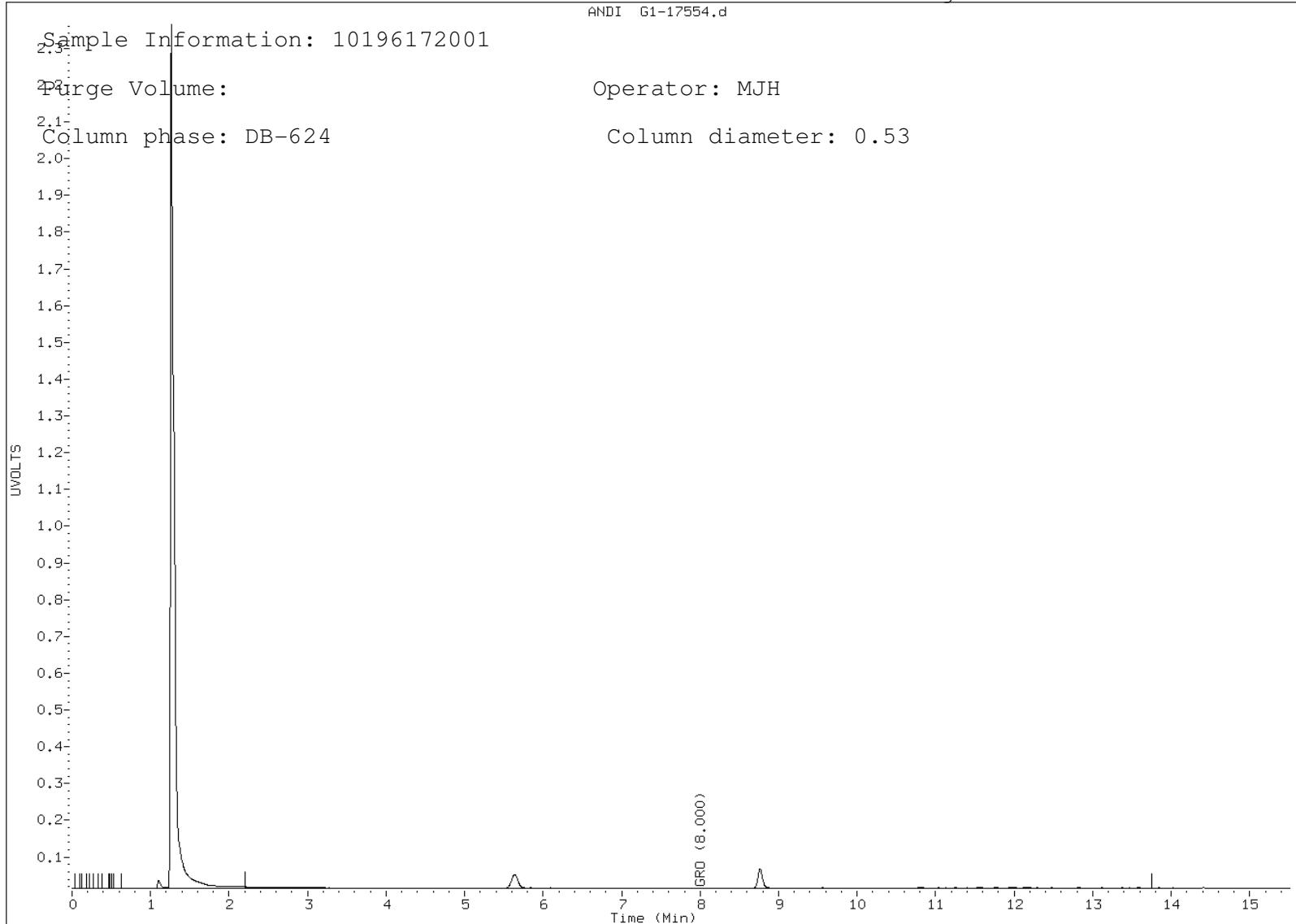
Sample Information: 10196172001

Purge Volume:

Operator: MJH

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17544.d Page 1
Report Date: 24-Jun-2012 20:26

Pace Analytical Services

WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17544.d
Lab Smp Id: 10196172008 Client Smp ID: 10196172008
Inj Date : 24-JUN-2012 02:41
Operator : MJH Inst ID: 10gcv3.i
Smp Info : 10196172008,10X
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 24-Jun-2012 13:43 mheckman Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

DF	10.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added(
Cpnd	Variable	Local Compound Variable

CONCENTRATIONS

Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN	FINAL
					(ug/L)	(mg/Kg)
S 5 GRO	2.250-13.750			4479546	403.629	201.8

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17544.d

Report Date: 06/24/2012

Sample ID: 10196172008

Client ID: 10196172008

Instrument: 10gcv3.i

ANDI G1-17544.d

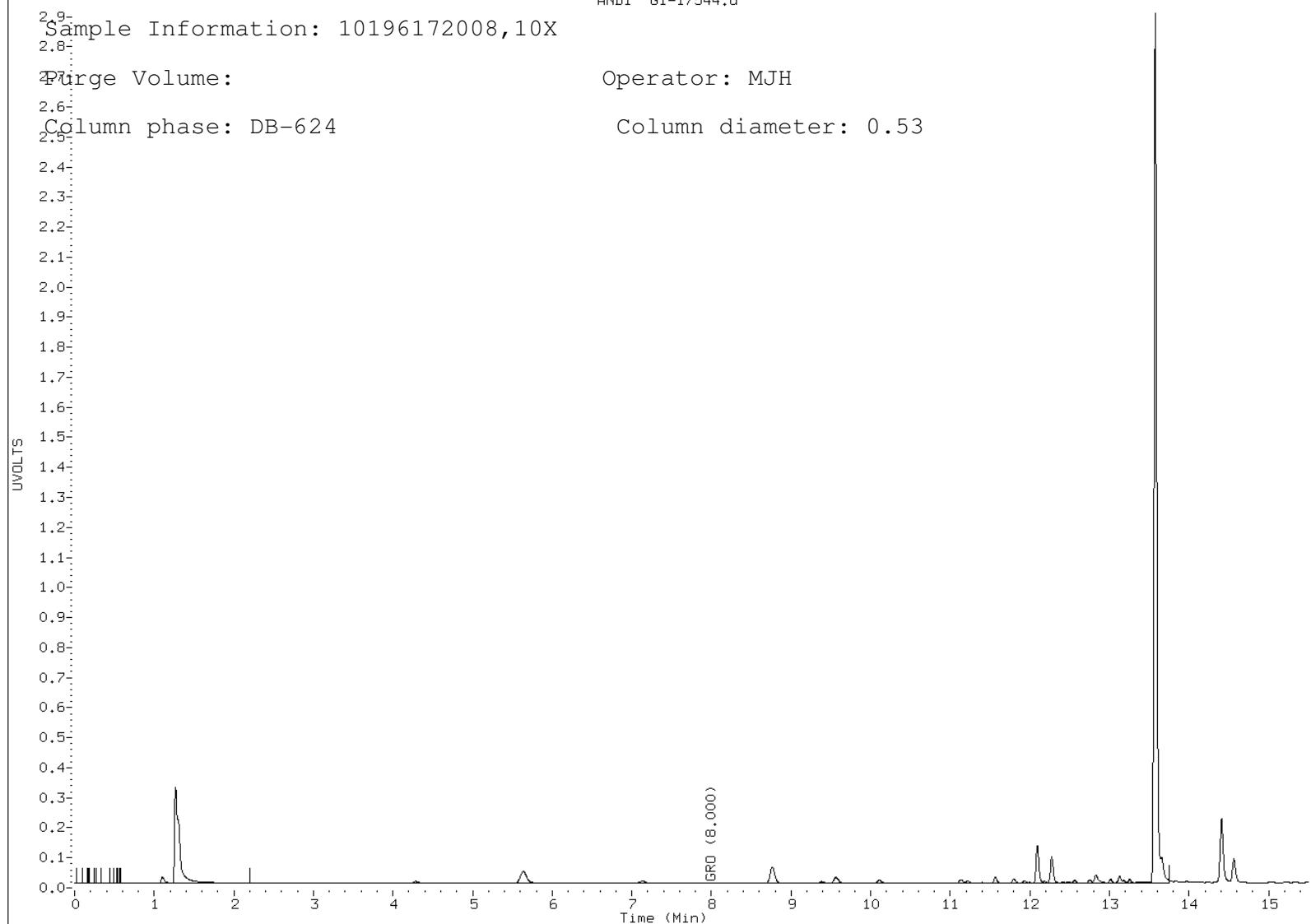
Sample Information: 10196172008, 10X

Purge Volume:

Operator: MJH

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17555.d Page 1
Report Date: 24-Jun-2012 20:26

Pace Analytical Services

WIGRO GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G1-17555.d
Lab Smp Id: 10196172002 Client Smp ID: 10196172002
Inj Date : 24-JUN-2012 06:15
Operator : MJH Inst ID: 10gcv3.i
Smp Info : 10196172002
Misc Info : 9433
Comment : WIGRO GASOLINE RANGE ORGANICS
Method : \\192.168.10.12\chem\10gcv3.i\062312b-2.b\G312-GROsoil-164.m
Meth Date : 24-Jun-2012 13:43 mheckman Quant Type: ESTD
Cal Date : 13-JUN-2012 02:53 Cal File: G1-16442.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description
------	-------	-------------

Cpnd	Variable	Local Compound Variable
DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added (

CONCENTRATIONS

							ON-COLUMN	FINAL
Compounds		RT	EXP RT	DLT	RT	RESPONSE	(ug/L)	(mg/Kg)
=====		====	=====	=====	====	=====	=====	=====
S 5 GRO						Compound Not Detected.		

Data File: \\192.168.10.12\chem\10gcv3.i\062312b-2.b/G1-17555.d

Report Date: 06/24/2012

Sample ID: 10196172002

Client ID: 10196172002

Instrument: 10gcv3.i

ANDI G1-17555.d

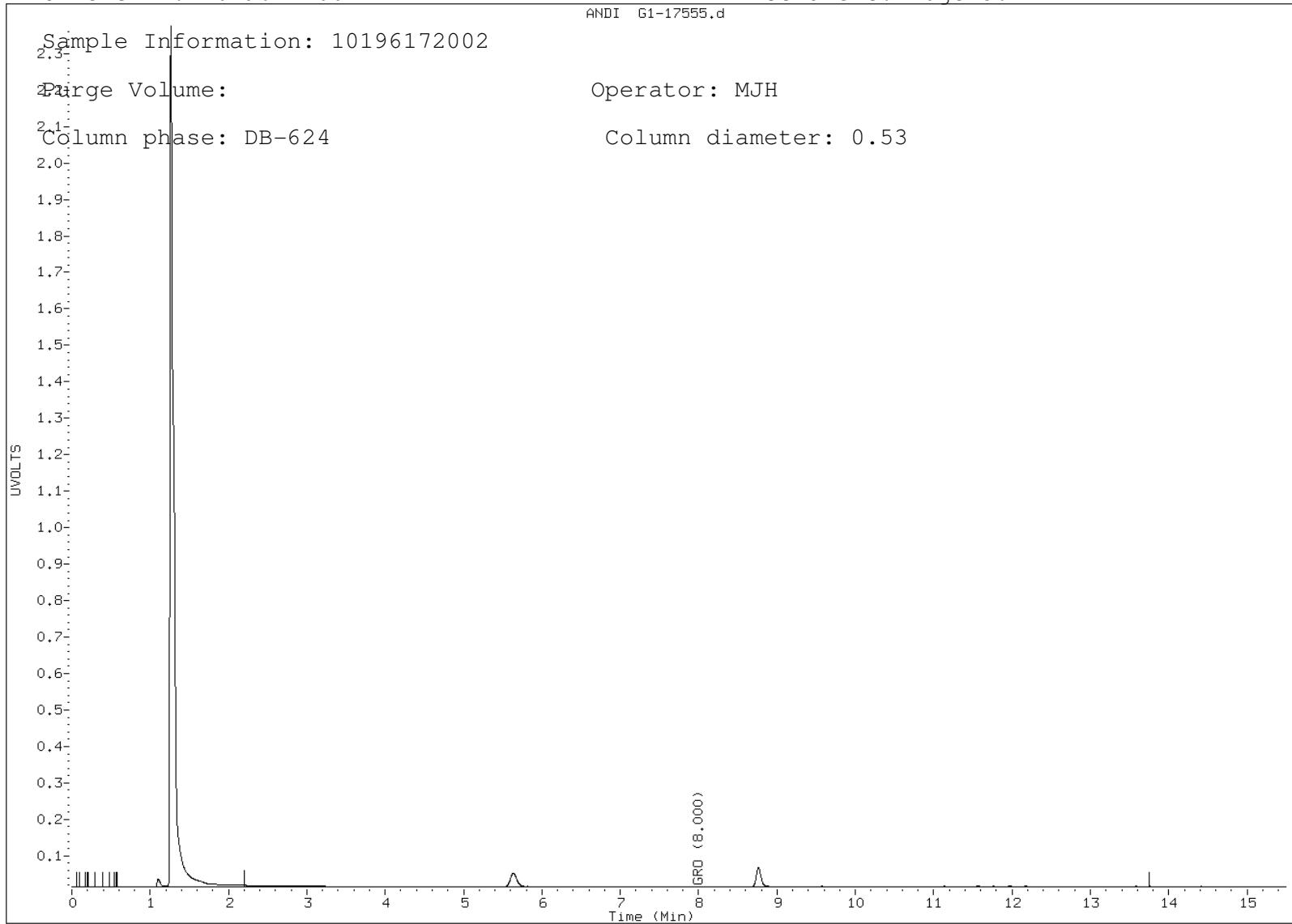
Sample Information: 10196172002

Purge Volume:

Operator: MJH

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0009.D Page 1
Report Date: 23-Jun-2012 13:11

Pace Analytical Services

WI Dept of Nat. Resources- WIDRO

Data file : \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0009.D

Lab Smp Id: 10196172008

Inj Date : 23-JUN-2012 11:39

Operator : JRH Inst ID: 10gcs5.i

Smp Info : 10196172008,2

Misc Info : 9724

Comment : C10-C28 DRO

Method : \\192.168.10.12\chem\10gcs5.i\062312dro.b\WDRO5-061112.m

Meth Date : 23-Jun-2012 13:09 jheinecke Quant Type: ESTD

Cal Date : 11-JUN-2012 13:46 Cal File: 163F0031.D

Als bottle: 7

Dil Factor: 2.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10VOA3

Concentration Formula: Amt * DF * Uf * Vt/(Ws * Vi*(100-M)/100) * CpndVariable

Name	Value	Description
------	-------	-------------

DF	2.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1.000	Volume of final extract (mL)
Ws	25.000	Weight of sample extracted (g)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd	Variable	Local Compound Variable

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/kg)
=====	====	=====	=====	=====	=====	=====
S 2 DRO		1.320-2.500		140133653	1012.11	81.0
\$ 5 n-Triacontane (S)	2.546	2.545	0.001	7881605	77.4266	6.19(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount

Below Limit Of Quantitation(BLOQ).

M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0009.D

Report Date: 06/23/2012

Sample ID: 10196172008

Client ID:

Instrument: 10gcs5.i

HP5890 GC Data, FID1A.CH

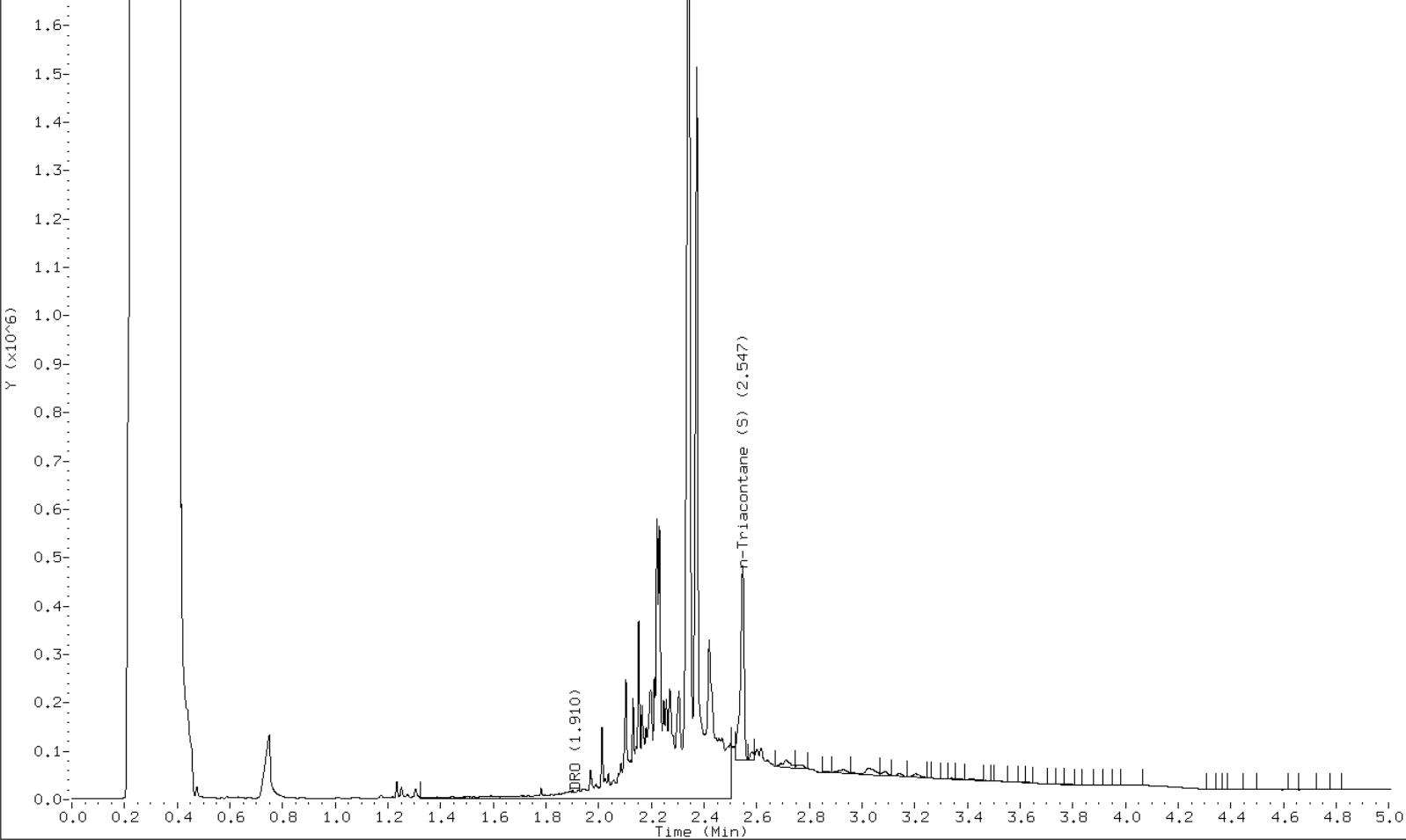
Sample Information: 10196172008,2

Purge Volume:

Operator: JRH

¹³C Column phase: DB-5MS

Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0013.D Page 1
Report Date: 23-Jun-2012 13:16

Pace Analytical Services

WI Dept of Nat. Resources- WIDRO

Data file : \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0013.D

Lab Smp Id: 10196172006

Inj Date : 23-JUN-2012 12:10

Operator : JRH Inst ID: 10gcs5.i

Smp Info : 10196172006,20

Misc Info : 9724

Comment : C10-C28 DRO

Method : \\192.168.10.12\chem\10gcs5.i\062312dro.b\WDRO5-061112.m

Meth Date : 23-Jun-2012 13:09 jheinecke Quant Type: ESTD

Cal Date : 11-JUN-2012 13:46 Cal File: 163F0031.D

Als bottle: 11

Dil Factor: 20.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10VOA3

Concentration Formula: Amt * DF * Uf * Vt/(Ws * Vi*(100-M)/100) * CpndVariable

Name	Value	Description
------	-------	-------------

DF	20.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1.000	Volume of final extract (mL)
Ws	25.000	Weight of sample extracted (g)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd	Variable	Local Compound Variable

CONCENTRATIONS

Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (mg/kg)
=====	=====	=====	=====	=====	=====	=====
S 2 DRO	1.320-2.500			540859816	3950.48	3160
\$ 5 n-Triacontane (S)	2.555	2.545	0.010	561918	5.52012	4.42(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount

Below Limit Of Quantitation(BLOQ).

M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0013.D

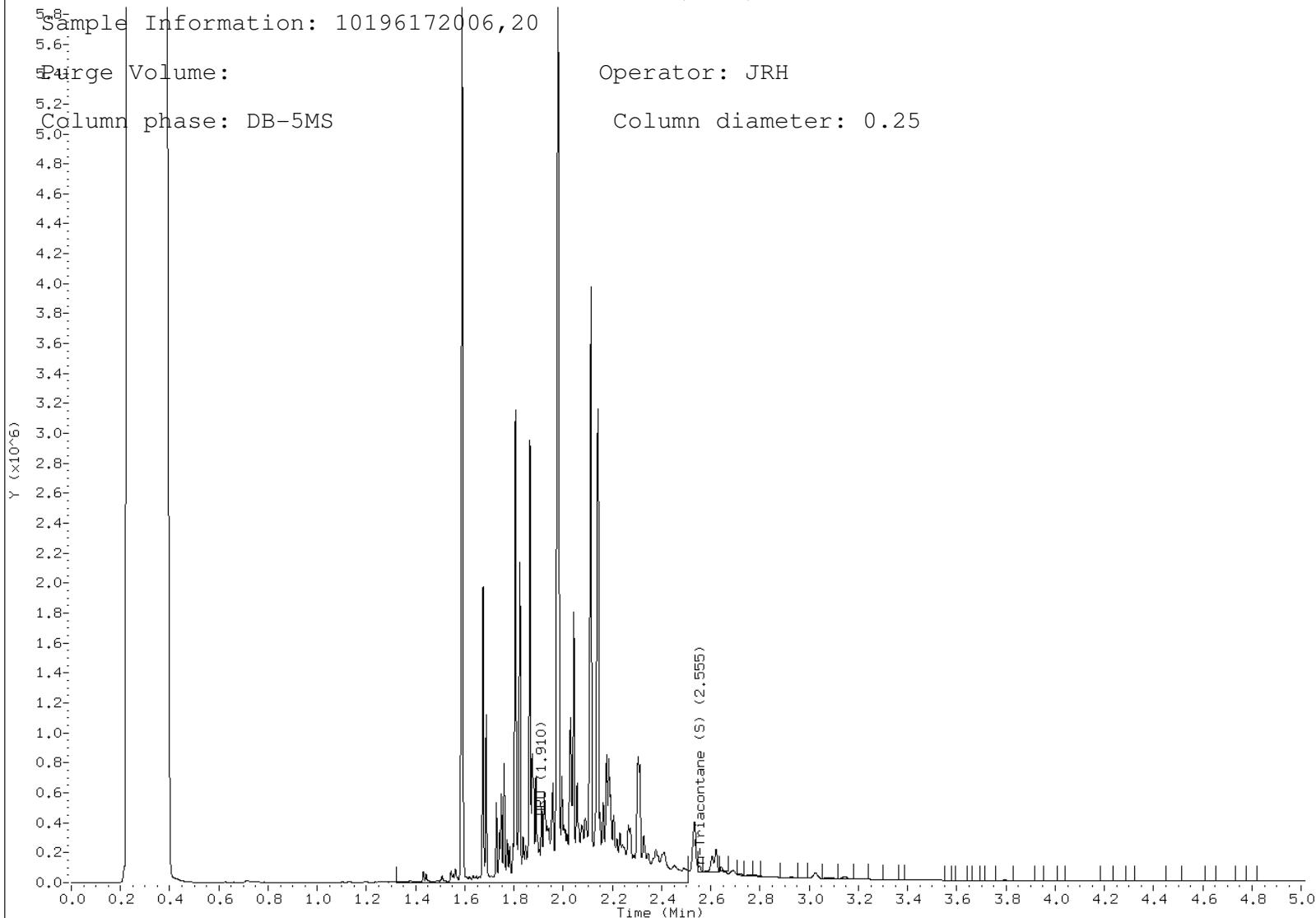
Report Date: 06/23/2012

Sample ID: 10196172006

Client ID:

Instrument: 10gcs5.i

HP5890 GC Data, FID1A.CH



Data File: \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0010.D Page 1
Report Date: 23-Jun-2012 13:12

Pace Analytical Services

WI Dept of Nat. Resources- WIDRO

Data file : \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0010.D

Lab Smp Id: 10196172005

Inj Date : 23-JUN-2012 11:47

Operator : JRH Inst ID: 10gcs5.i

Smp Info : 10196172005,2

Misc Info : 9724

Comment : C10-C28 DRO

Method : \\192.168.10.12\chem\10gcs5.i\062312dro.b\WDRO5-061112.m

Meth Date : 23-Jun-2012 13:09 jheinecke Quant Type: ESTD

Cal Date : 11-JUN-2012 13:46 Cal File: 163F0031.D

Als bottle: 8

Dil Factor: 2.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10VOA3

Concentration Formula: Amt * DF * Uf * Vt/(Ws * Vi*(100-M)/100) * CpndVariable

Name	Value	Description
------	-------	-------------

DF	2.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1.000	Volume of final extract (mL)
Ws	25.000	Weight of sample extracted (g)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	CONCENTRATIONS					
	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN	FINAL
					(ug/mL)	(mg/kg)
S 2 DRO	1.320-2.500		64252423	455.704	36.4	
\$ 5 n-Triacontane (S)	2.545	2.545	0.000	1640024	16.1111	1.29(aRM)

QC Flag Legend

a - Target compound detected but, quantitated amount

Below Limit Of Quantitation(BLOQ).

R - Spike/Surrogate failed recovery limits.

M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0010.D

Report Date: 06/23/2012

Sample ID: 10196172005

Client ID:

Instrument: 10gcs5.i

HP5890 GC Data.FID1A.CH

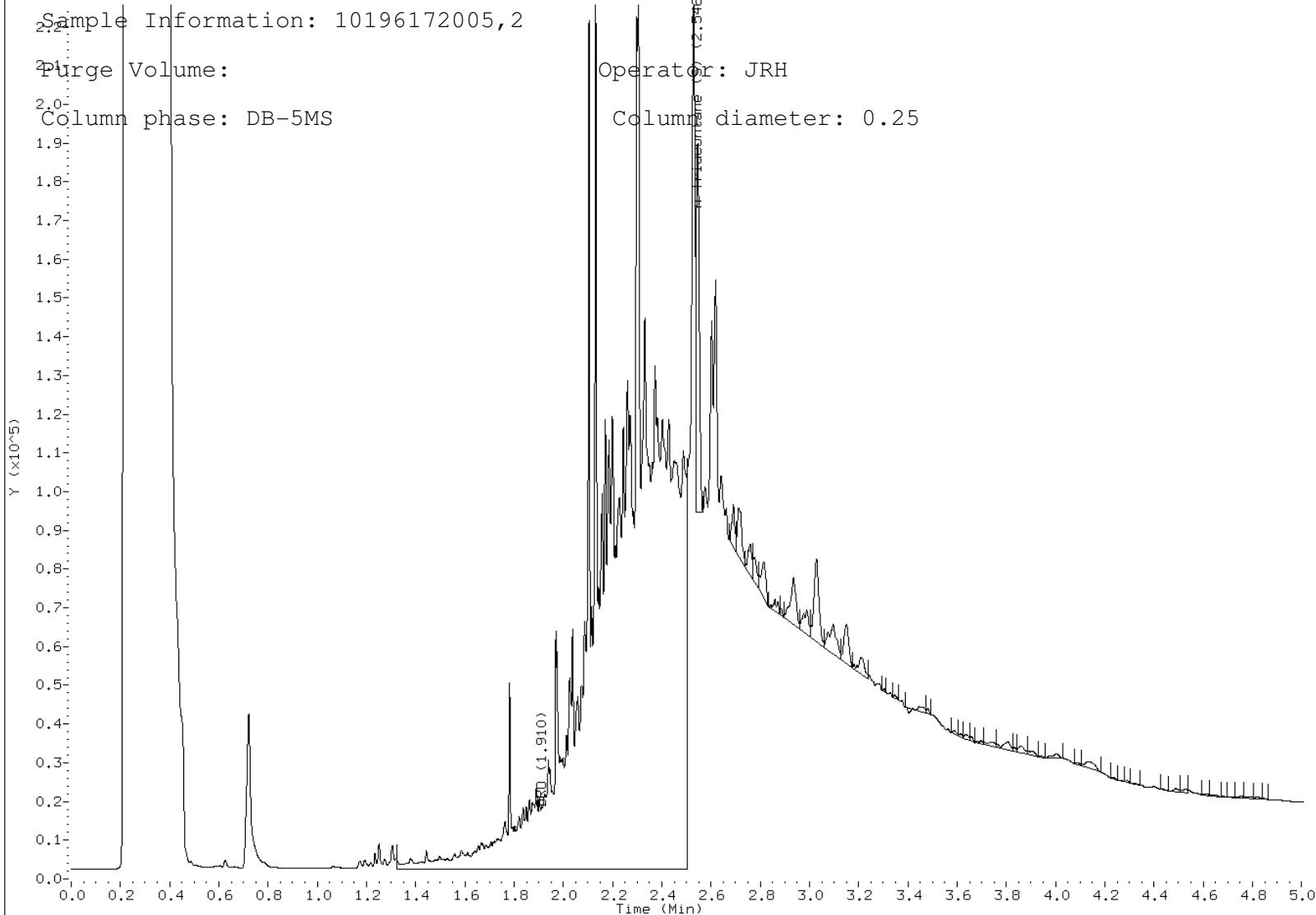
Sample Information: 10196172005,2

Purge Volume:

Operator: JRH

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0008.D Page 1

Report Date: 23-Jun-2012 13:11

Pace Analytical Services

WI Dept of Nat. Resources- WIDRO

Data file : \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0008.D

Lab Smp Id: 10196172003

Inj Date : 23-JUN-2012 11:31

Operator : JRH Inst ID: 10gcs5.i

Smp Info : 10196172003,2

Misc Info : 9724

Comment : C10-C28 DRO

Method : \\192.168.10.12\chem\10gcs5.i\062312dro.b\WDRO5-061112.m

Meth Date : 23-Jun-2012 13:09 jheinecke Quant Type: ESTD

Cal Date : 11-JUN-2012 13:46 Cal File: 163F0031.D

Als bottle: 6

Dil Factor: 2.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10VOA3

Concentration Formula: Amt * DF * Uf * Vt/(Ws * Vi*(100-M)/100) * CpndVariable

Name	Value	Description
------	-------	-------------

DF	2.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1.000	Volume of final extract (mL)
Ws	25.000	Weight of sample extracted (g)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd	Variable	Local Compound Variable

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/kg)
=====	====	=====	=====	=====	=====	=====
S 2 DRO		1.320-2.500		109148839	784.913	62.8
\$ 5 n-Triacontane (S)	2.551	2.545	0.006	5277236	51.8420	4.15(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount

Below Limit Of Quantitation(BLOQ).

M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcs5.i\062312dro.b\175F0008.D

Report Date: 06/23/2012

Sample ID: 10196172003

Client ID:

Instrument: 10gcs5.i

HP5890 GC Data, FID1A.CH

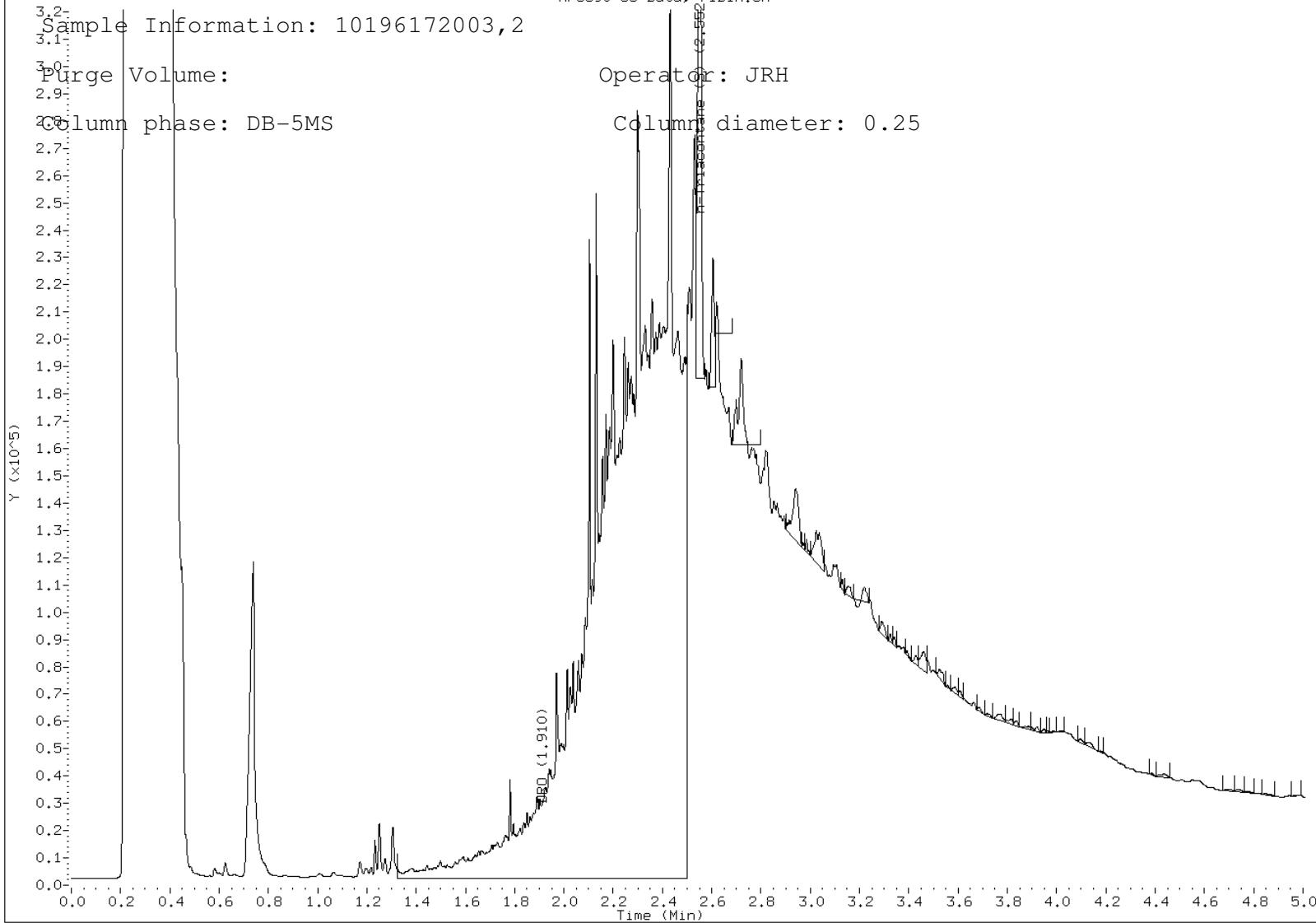
Sample Information: 10196172003,2

Purge Volume:

Operator: JRH

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0028.D Page 1

Report Date: 23-Jun-2012 11:51

Pace Analytical Services

WI Dept of Nat. Resources- WIDRO

Data file : \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0028.D

Lab Smp Id: 10196172007

Inj Date : 22-JUN-2012 18:07

Operator : JRH Inst ID: 10gcs5.i

Smp Info : 10196172007,2

Misc Info : 9724

Comment : C10-C28 DRO

Method : \\192.168.10.12\chem\10gcs5.i\062212dro2.b\WDRO5-061112.m

Meth Date : 23-Jun-2012 10:30 jheinecke Quant Type: ESTD

Cal Date : 11-JUN-2012 13:46 Cal File: 163F0031.D

Als bottle: 19

Dil Factor: 2.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10VOA3

Concentration Formula: Amt * DF * Uf * Vt/(Ws * Vi*(100-M)/100) * CpndVariable

Name	Value	Description
------	-------	-------------

DF	2.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1.000	Volume of final extract (mL)
Ws	25.000	Weight of sample extracted (g)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd	Variable	Local Compound Variable

CONCENTRATIONS

		RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/kg)	
Compounds								ON-COLUMN FINAL
=====	=====	=====	=====	=====	=====	=====	=====	=====
S 2 DRO		1.330-2.480			635969378	4647.89	372	
\$ 5 n-Triacontane (S)		2.548	2.525	0.023	5181944	50.9059	4.07(aM)	

QC Flag Legend

a - Target compound detected but, quantitated amount

Below Limit Of Quantitation(BLOQ).

M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0028.D

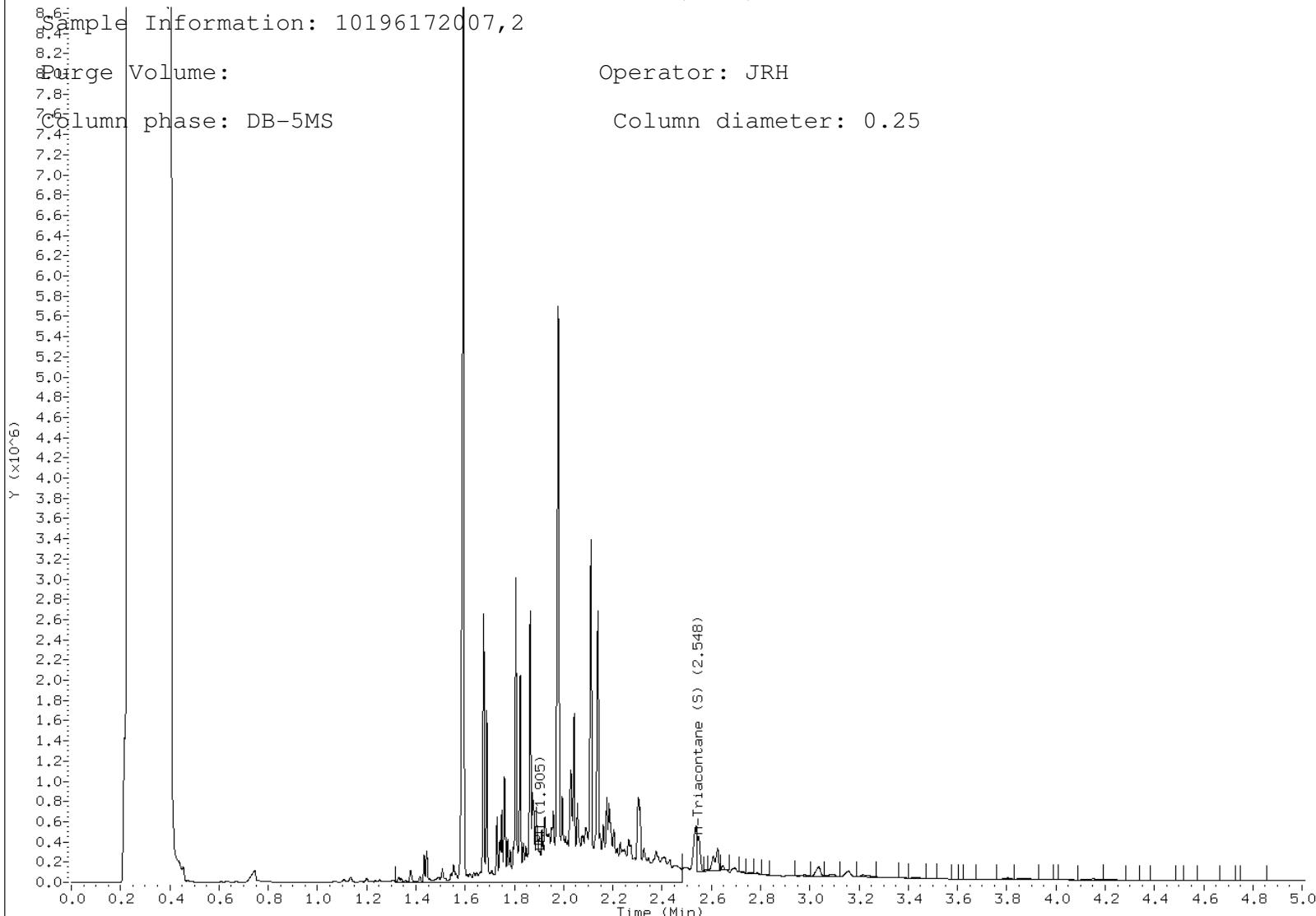
Report Date: 06/23/2012

Sample ID: 10196172007

Client ID:

Instrument: 10gcs5.i

HP5890 GC Data, FID1A.CH



Data File: \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0027.D Page 1
Report Date: 23-Jun-2012 10:48

Pace Analytical Services

WI Dept of Nat. Resources- WIDRO

Data file : \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0027.D

Lab Smp Id: 10196172001

Inj Date : 22-JUN-2012 17:59

Operator : JRH Inst ID: 10gcs5.i

Smp Info : 10196172001

Misc Info : 9724

Comment : C10-C28 DRO

Method : \\192.168.10.12\chem\10gcs5.i\062212dro2.b\WDRO5-061112.m

Meth Date : 23-Jun-2012 10:30 jheinecke Quant Type: ESTD

Cal Date : 11-JUN-2012 13:46 Cal File: 163F0031.D

Als bottle: 18

Dil Factor: 1.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10VOA3

Concentration Formula: Amt * DF * Uf * Vt/(Ws * Vi*(100-M)/100) * CpndVariable

Name	Value	Description
------	-------	-------------

DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1.000	Volume of final extract (mL)
Ws	25.000	Weight of sample extracted (g)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS

ON-COLUMN FINAL

Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/kg)
=====	====	=====	=====	=====	=====	=====
S 2 DRO	1.330-2.480			81616087	583.025	23.3
\$ 5 n-Triacontane (S)	2.549	2.525	0.024	9945791	97.7045	3.91(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount

Below Limit Of Quantitation(BLOQ).

M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0027.D

Report Date: 06/23/2012

Sample ID: 10196172001

Client ID:

Instrument: 10gcs5.i

HP5890 GC Data, FID1A.CH

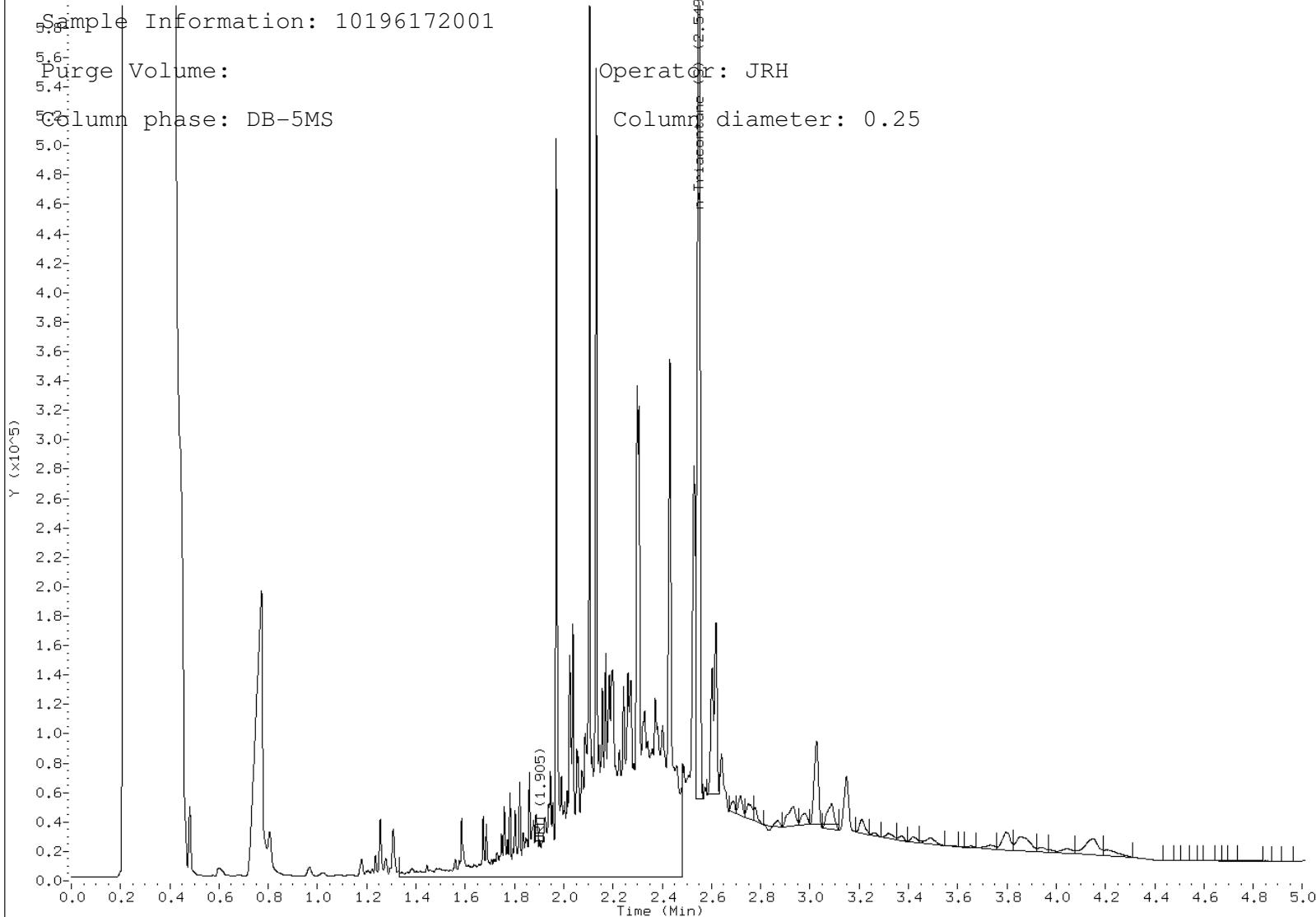
Sample Information: 10196172001

Purge Volume:

Column phase: DB-5MS

Operator: JRH

Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0020.D Page 1
Report Date: 23-Jun-2012 11:51

Pace Analytical Services

WI Dept of Nat. Resources- WIDRO

Data file : \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0020.D

Lab Smp Id: 10196172004

Inj Date : 22-JUN-2012 17:05

Operator : JRH Inst ID: 10gcs5.i

Smp Info : 10196172004

Misc Info : 9724

Comment : C10-C28 DRO

Method : \\192.168.10.12\chem\10gcs5.i\062212dro2.b\WDRO5-061112.m

Meth Date : 23-Jun-2012 10:30 jheinecke Quant Type: ESTD

Cal Date : 11-JUN-2012 13:46 Cal File: 163F0031.D

Als bottle: 11

Dil Factor: 1.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10VOA3

Concentration Formula: Amt * DF * Uf * Vt/(Ws * Vi*(100-M)/100) * CpndVariable

Name	Value	Description
------	-------	-------------

DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1.000	Volume of final extract (mL)
Ws	25.000	Weight of sample extracted (g)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS

					ON-COLUMN	FINAL			
Compounds		RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/kg)		
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
S 2 DRO		1.330-2.480			12927543	79.3588	3.17(a)		
\$ 5 n-Triacontane (S)		2.548	2.525	0.023	12051845	118.394	4.74 (aM)		

QC Flag Legend

a - Target compound detected but, quantitated amount

Below Limit Of Quantitation(BLOQ).

M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0020.D

Report Date: 06/23/2012

Sample ID: 10196172004

Client ID:

Instrument: 10gcs5.i

HP5890 GC Data, FID1A.CH

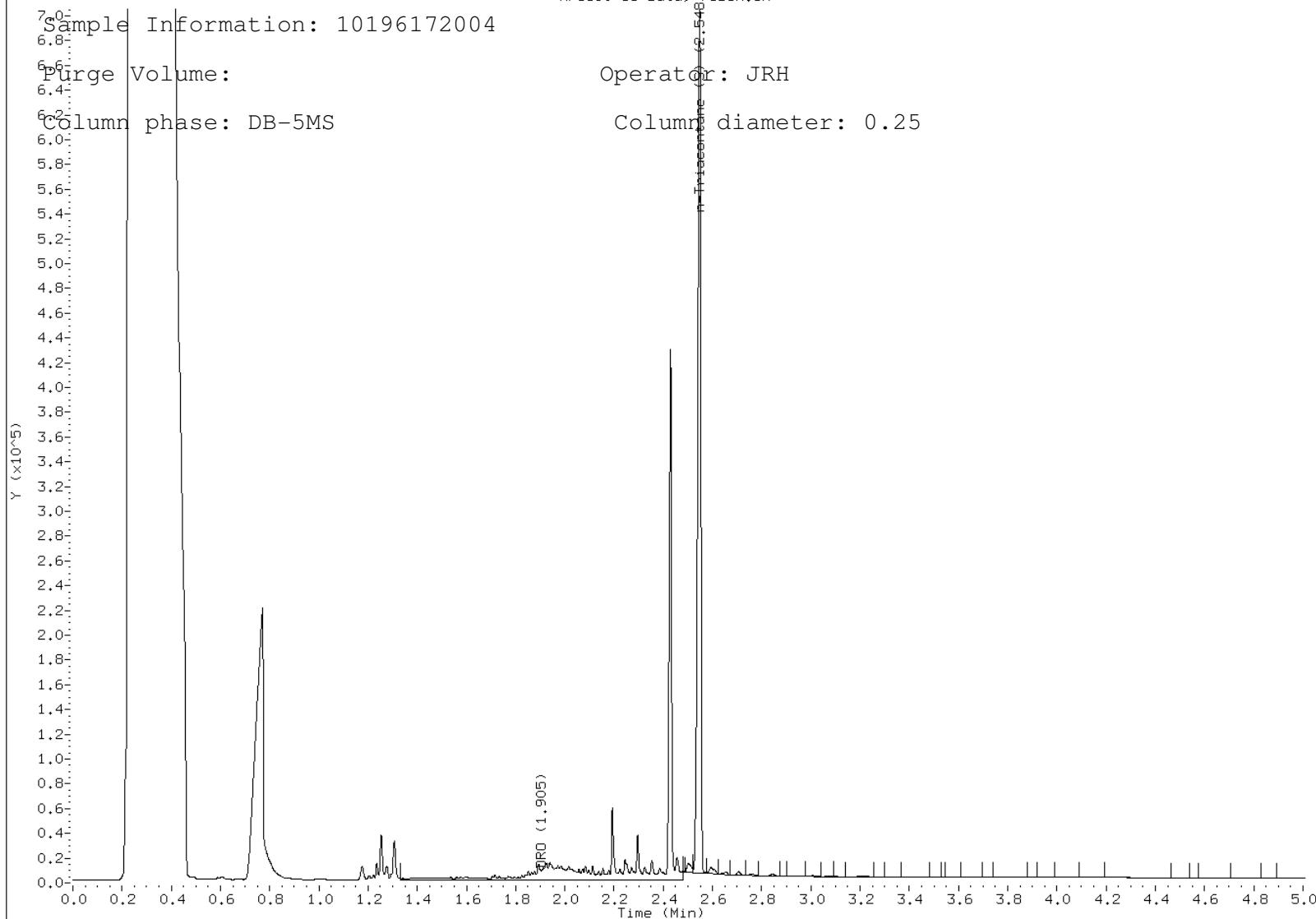
Sample Information: 10196172004

Purge Volume:

Operator: JRH

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0019.D Page 1
Report Date: 23-Jun-2012 11:51

Pace Analytical Services

WI Dept of Nat. Resources- WIDRO

Data file : \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0019.D

Lab Smp Id: 10196172002

Inj Date : 22-JUN-2012 16:54

Operator : JRH Inst ID: 10gcs5.i

Smp Info : 10196172002

Misc Info : 9724

Comment : C10-C28 DRO

Method : \\192.168.10.12\chem\10gcs5.i\062212dro2.b\WDRO5-061112.m

Meth Date : 23-Jun-2012 10:30 jheinecke Quant Type: ESTD

Cal Date : 11-JUN-2012 13:46 Cal File: 163F0031.D

Als bottle: 10

Dil Factor: 1.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10VOA3

Concentration Formula: Amt * DF * Uf * Vt/(Ws * Vi*(100-M)/100) * CpndVariable

Name	Value	Description
------	-------	-------------

DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1.000	Volume of final extract (mL)
Ws	25.000	Weight of sample extracted (g)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

CONCENTRATIONS

Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (mg/kg)
=====	=====	=====	=====	=====	=====	=====
S 2 DRO	1.330-2.480			14173040	88.4915	3.54(a)
\$ 5 n-Triacontane (S)	2.548	2.525	0.023	11886732	116.772	4.67(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount

Below Limit Of Quantitation(BLOQ).

M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcs5.i\062212dro2.b\174F0019.D

Report Date: 06/23/2012

Sample ID: 10196172002

Client ID:

Instrument: 10gcs5.i

HP5890 GC Data, FID1A.CH

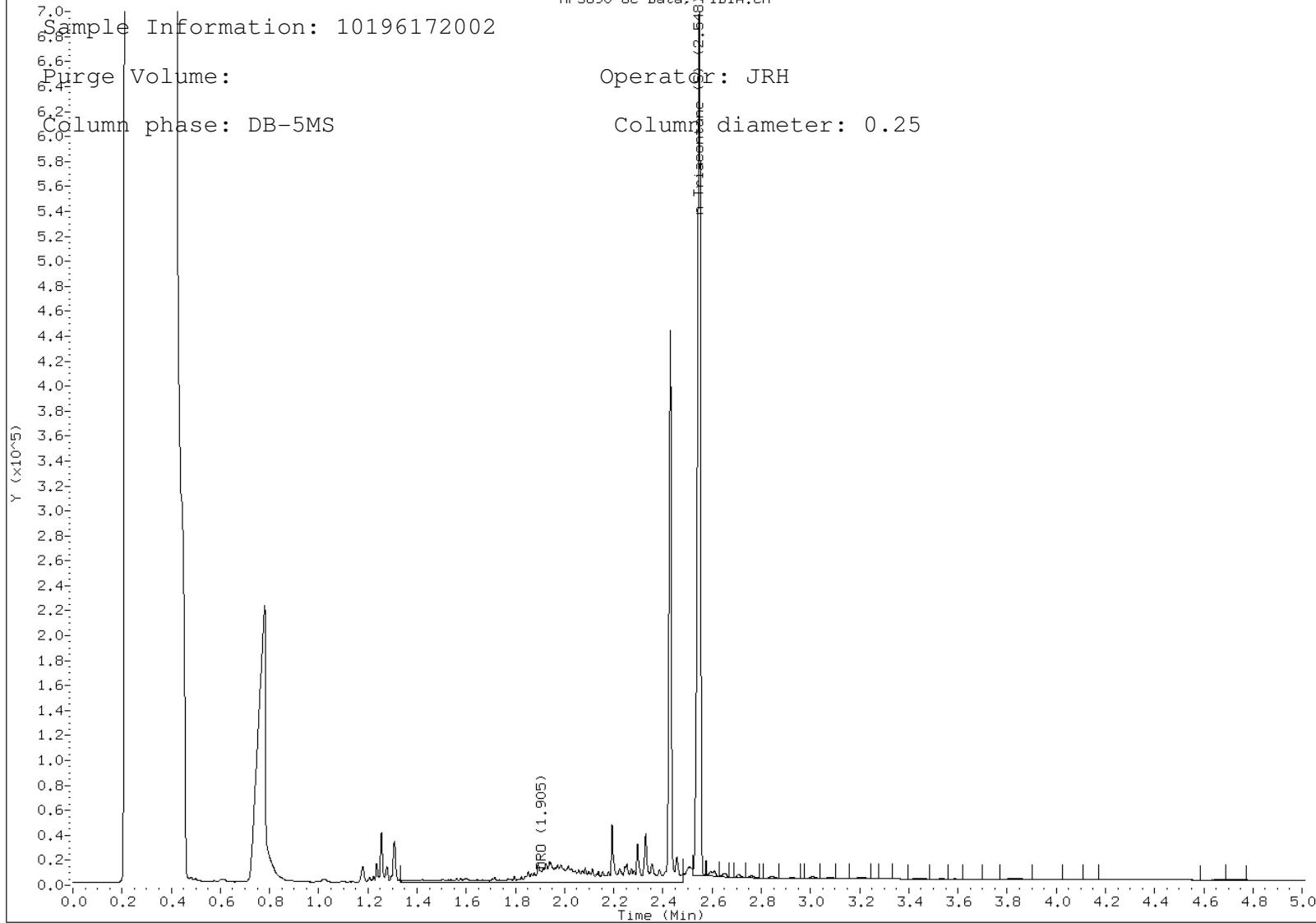
Sample Information: 10196172002

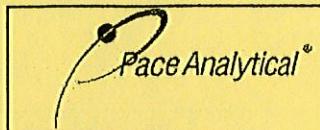
Purge Volume:

Operator: JRH

Column phase: DB-5MS

Column diameter: 0.25





Document Name:
Sample Condition Upon Receipt Form

Revised Date: 15Feb2012

Page 1 of 1

Document Number:

Issuing Authority:

F-MN-L-213-rev.02

Pace Minnesota Quality Office

**Sample Condition
Upon Receipt**

Client Name: Short Elliott Hendrickson Project # 10196172Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Optional
Proj. Due Date
Proj. Name

Custody Seal on Cooler/Box Present: yes no Seals intact: yes noPacking Material: Bubble Wrap Bubble Bags None Other _____ Temp Blank: Yes No _____Thermometer Used 80344042 or 80512447 Type of Ice: Wet Blue None Samples on ice, cooling process has begunCooler Temperature 31

Biological Tissue is Frozen: Yes No

Comments: Date and Initials of person examining contents: CW 6/20/10

Temp should be above freezing to 6°C

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>SL</u>	(WT) TRIP BLANK ON C.O.C. (SL) TRIP BLANK
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	HNO3 H2SO4 NaOH HCl
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4, HCl<2; NaOH >12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Samp #
Exceptions: VOA, Coliform, TOC, Oil and Grease, VI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Pace Trip Blank Lot # (if purchased): <u>013012-3</u>	1 Trip Blank	

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

_____Project Manager Review: CDR Date: 6-21-12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

August 21, 2012

Al Sunderman
Short, Elliot & Hendrickson
3535 Vadnais Ct. Dr.
St. Paul, MN 55110

RE: Project: 120761 MCES
Pace Project No.: 10202295

Dear Al Sunderman:

Enclosed are the analytical results for sample(s) received by the laboratory on August 14, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Carol Davy

carol.davy@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 120761 MCES
Pace Project No.: 10202295

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Iowa Certification #: 368
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace

Montana Certification #: MT CERT0092
Nebraska Certification #: Pace
Nevada Certification #: MN_00064
New Jersey Certification #: MN-002
New Mexico Certification #: Pace
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: D9921
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Virginia/DCLS Certification #: 002521
Virginia/VELAP Certification #: 460163
Washington Certification #: C754
Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 120761 MCES
Pace Project No.: 10202295

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10202295001	SS-05-1.5	Solid	08/08/12 13:30	08/14/12 15:15
10202295002	SS-06-1.5	Solid	08/08/12 13:00	08/14/12 15:15
10202295003	SS-07-1.5	Solid	08/08/12 14:30	08/14/12 15:15
10202295004	SS-08-1.5	Solid	08/08/12 14:00	08/14/12 15:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 120761 MCES
Pace Project No.: 10202295

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10202295001	SS-05-1.5	EPA 6010	IP	1
		ASTM D2974	JDL	1
10202295002	SS-06-1.5	EPA 6010	IP	7
		EPA 7471	TEM	1
		ASTM D2974	JDL	1
10202295003	SS-07-1.5	EPA 6010	IP	1
		ASTM D2974	JDL	1
10202295004	SS-08-1.5	EPA 6010	IP	1
		ASTM D2974	JDL	1

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 120761 MCES
Pace Project No.: 10202295

Method: EPA 6010
Description: 6010 MET ICP
Client: SEH_MN
Date: August 21, 2012

General Information:

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MPRP/34542

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10202288001,10202330010

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1266827)
 - Barium
 - Lead
- MSD (Lab ID: 1266826)
 - Barium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 120761 MCES
Pace Project No.: 10202295

Method: EPA 7471
Description: 7471 Mercury
Client: SEH_MN
Date: August 21, 2012

General Information:

1 sample was analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 120761 MCES
Pace Project No.: 10202295

Sample: SS-05-1.5 Lab ID: 10202295001 Collected: 08/08/12 13:30 Received: 08/14/12 15:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	24.7 mg/kg	0.30	0.050	1	08/16/12 12:59	08/17/12 17:57	7439-92-1		
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	10.2 %	0.10	0.10	1		08/16/12 00:00			

ANALYTICAL RESULTS

Project: 120761 MCES
Pace Project No.: 10202295

Sample: SS-06-1.5 Lab ID: 10202295002 Collected: 08/08/12 13:00 Received: 08/14/12 15:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	12.3 mg/kg		0.42	0.10	1	08/16/12 12:59	08/16/12 23:23	7440-38-2	
Barium	26.9 mg/kg		0.42	0.017	1	08/16/12 12:59	08/16/12 23:23	7440-39-3	
Cadmium	0.50 mg/kg		0.042	0.017	1	08/16/12 12:59	08/16/12 23:23	7440-43-9	
Chromium	8.8 mg/kg		0.42	0.21	1	08/16/12 12:59	08/16/12 23:23	7440-47-3	
Lead	30.0 mg/kg		0.25	0.042	1	08/16/12 12:59	08/17/12 18:02	7439-92-1	
Selenium	1.0 mg/kg		0.63	0.14	1	08/16/12 12:59	08/16/12 23:23	7782-49-2	
Silver	ND mg/kg		0.42	0.050	1	08/16/12 12:59	08/16/12 23:23	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	ND mg/kg		0.021	0.0062	1	08/16/12 12:28	08/20/12 12:24	7439-97-6	
Dry Weight Analytical Method: ASTM D2974									
Percent Moisture	3.3 %		0.10	0.10	1		08/16/12 00:00		

ANALYTICAL RESULTS

Project: 120761 MCES
Pace Project No.: 10202295

Sample: SS-07-1.5 Lab ID: 10202295003 Collected: 08/08/12 14:30 Received: 08/14/12 15:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	89.7	mg/kg	0.27	0.045	1	08/16/12 12:59	08/17/12 18:16	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	4.6	%	0.10	0.10	1		08/16/12 00:00		

ANALYTICAL RESULTS

Project: 120761 MCES
Pace Project No.: 10202295

Sample: SS-08-1.5 Lab ID: 10202295004 Collected: 08/08/12 14:00 Received: 08/14/12 15:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	24.0 mg/kg	0.26	0.043	1	08/16/12 12:59	08/17/12 18:22	7439-92-1		
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	8.1 %	0.10	0.10	1		08/16/12 00:00			

QUALITY CONTROL DATA

Project: 120761 MCES

Pace Project No.: 10202295

QC Batch:	MERP/7352	Analysis Method:	EPA 7471
QC Batch Method:	EPA 7471	Analysis Description:	7471 Mercury
Associated Lab Samples:	10202295002		

METHOD BLANK:	1268045	Matrix:	Solid
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Associated Lab Samples: 10202295002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.020	08/20/12 12:20	

LABORATORY CONTROL SAMPLE: 1268046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.45	0.47	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1268047 1268048

Parameter	Units	10202295002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Mercury	mg/kg	ND	.5	.44	0.53	0.48	104	104	80-120	12	20	

QUALITY CONTROL DATA

Project: 120761 MCES

Pace Project No.: 10202295

QC Batch: MPRP/34542 Analysis Method: EPA 6010

QC Batch Method: EPA 3050 Analysis Description: 6010 MET

Associated Lab Samples: 10202295001, 10202295002, 10202295003, 10202295004

METHOD BLANK: 1266823 Matrix: Solid

Associated Lab Samples: 10202295001, 10202295002, 10202295003, 10202295004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.38	08/16/12 22:43	
Barium	mg/kg	ND	0.38	08/16/12 22:43	
Cadmium	mg/kg	ND	0.038	08/16/12 22:43	
Chromium	mg/kg	ND	0.38	08/16/12 22:43	
Lead	mg/kg	ND	0.23	08/17/12 17:38	
Selenium	mg/kg	ND	0.57	08/16/12 22:43	
Silver	mg/kg	ND	0.38	08/16/12 22:43	

LABORATORY CONTROL SAMPLE: 1266824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	42.4	37.5	88	80-120	
Barium	mg/kg	42.4	39.5	93	80-120	
Cadmium	mg/kg	42.4	36.7	87	80-120	
Chromium	mg/kg	42.4	39.9	94	80-120	
Lead	mg/kg	42.4	38.3	90	80-120	
Selenium	mg/kg	42.4	34.2	81	80-120	
Silver	mg/kg	21.2	19.2	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1266825 1266826

Parameter	Units	MS		MSD		MS Result	MS % Rec	MSD Result	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
		10202288001	Spike Conc.	Spike Conc.	MS Result								
Arsenic	mg/kg	9.9	48.9	36.2	57.3	43.7	97	94	75-125	27	30		
Barium	mg/kg	47.4	48.9	36.2	94.0	73.7	95	73	75-125	24	30	M1	
Cadmium	mg/kg	0.71	48.9	36.2	42.5	31.3	85	84	75-125	30	30		
Chromium	mg/kg	9.2	48.9	36.2	55.8	43.1	95	94	75-125	25	30		
Lead	mg/kg	43.6	48.9	36.2	91.8	72.0	99	79	75-125	24	30		
Selenium	mg/kg	1.2	48.9	36.2	40.1	29.7	80	79	75-125	30	30		
Silver	mg/kg	ND	24.5	18.1	22.2	16.6	91	92	75-125	29	30		

MATRIX SPIKE SAMPLE: 1266827

Parameter	Units	10202330010		Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
		Result						
Arsenic	mg/kg		15.5	47.4	58.5	91	75-125	
Barium	mg/kg		139	47.4	151	26	75-125	M1
Cadmium	mg/kg		0.70	47.4	41.6	86	75-125	
Chromium	mg/kg		10.1	47.4	55.6	96	75-125	

Date: 08/21/2012 03:38 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 120761 MCES

Pace Project No.: 10202295

MATRIX SPIKE SAMPLE: 1266827

Parameter	Units	10202330010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	209	47.4	308	208	75-125	M1
Selenium	mg/kg	1.4	47.4	41.9	85	75-125	
Silver	mg/kg	ND	23.7	22.3	94	75-125	

QUALITY CONTROL DATA

Project: 120761 MCES

Pace Project No.: 10202295

QC Batch: MPRP/34602 Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 10202295001, 10202295002, 10202295003, 10202295004

SAMPLE DUPLICATE: 1268168

Parameter	Units	10202295001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	10.2	10.7	5	30	

SAMPLE DUPLICATE: 1268169

Parameter	Units	10202328016 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.1	17.0	.6	30	

QUALIFIERS

Project: 120761 MCES
Pace Project No.: 10202295

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 120761 MCES
 Pace Project No.: 10202295

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10202295001	SS-05-1.5	EPA 3050	MPRP/34542	EPA 6010	ICP/14098
10202295002	SS-06-1.5	EPA 3050	MPRP/34542	EPA 6010	ICP/14098
10202295003	SS-07-1.5	EPA 3050	MPRP/34542	EPA 6010	ICP/14098
10202295004	SS-08-1.5	EPA 3050	MPRP/34542	EPA 6010	ICP/14098
10202295002	SS-06-1.5	EPA 7471	MERP/7352	EPA 7471	MERC/8170
10202295001	SS-05-1.5	ASTM D2974	MPRP/34602		
10202295002	SS-06-1.5	ASTM D2974	MPRP/34602		
10202295003	SS-07-1.5	ASTM D2974	MPRP/34602		
10202295004	SS-08-1.5	ASTM D2974	MPRP/34602		



Document Name:
Sample Condition Upon Receipt Form
Document No.:
F-MN-L-213-rev.03

Document Revised: 19Jun2012
Page 1 of 1
Issuing Authority:
Pace Minnesota Quality Office

Sample Condition
Upon Receipt

Client Name:

Project #:

WO# : 10202295

Set 1

Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Tracking Number:



Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Optional: Proj. Due Date: Proj. Name:

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermometer Used: 80344042 80512447 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature: 1.4 Biological Tissue Frozen? Yes No Date and Initials of Person Examining Contents: CS181412
Temp should be above freezing to 6°C

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Sampler Name and Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix:	SL			
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____

CRP

Date: 8-14-12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

September 18, 2012

Al Sunderman
Short, Elliot & Hendrickson
3535 Vadnais Ct. Dr.
St. Paul, MN 55110

RE: Project: MCES 120761
Pace Project No.: 10205364

Dear Al Sunderman:

Enclosed are the analytical results for sample(s) received by the laboratory on September 13, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Carol Davy

carol.davy@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: MCES 120761
Pace Project No.: 10205364

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Hawaii Certification #Pace
Idaho Certification #: MN00064
Illinois Certification #: 200011
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace

Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia/DCLS Certification #: 002521
Virginia/VELAP Certification #: 460163
Washington Certification #: C754
West Virginia Certification #: 382
Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: MCES 120761
Pace Project No.: 10205364

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10205364001	GP-33-4	Solid	09/11/12 10:30	09/13/12 14:29
10205364002	GP-33-8	Solid	09/11/12 10:30	09/13/12 14:29
10205364003	GP-34-4	Solid	09/11/12 10:45	09/13/12 14:29

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SAMPLE ANALYTE COUNT

Project: MCES 120761
Pace Project No.: 10205364

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10205364001	GP-33-4	EPA 6010	IP	1
		ASTM D2974	JDL	1
10205364002	GP-33-8	EPA 6010	IP	7
		EPA 7471	TEM	1
		ASTM D2974	JDL	1
10205364003	GP-34-4	EPA 6010	IP	1
		ASTM D2974	JDL	1
		EPA 8270 by SIM	JRH	23

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: MCES 120761
Pace Project No.: 10205364

Method: **EPA 6010**
Description: 6010 MET ICP
Client: SEH_MN
Date: September 18, 2012

General Information:

3 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MPRP/35175

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10204310005

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- MSD (Lab ID: 1288010)
- Barium

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1288009)
- Barium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: MCES 120761
Pace Project No.: 10205364

Method: EPA 7471
Description: 7471 Mercury
Client: SEH_MN
Date: September 18, 2012

General Information:

1 sample was analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: MCES 120761

Pace Project No.: 10205364

Method: **EPA 8270 by SIM**

Description: 8270 MSSV PAH by SIM

Client: SEH_MN

Date: September 18, 2012

General Information:

1 sample was analyzed for EPA 8270 by SIM. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3550 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MCES 120761

Pace Project No.: 10205364

Sample: GP-33-4 Lab ID: 10205364001 Collected: 09/11/12 10:30 Received: 09/13/12 14:29 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	11.8	mg/kg	0.33	0.055	1	09/15/12 07:27	09/17/12 14:31	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	14.1	%	0.10	0.10	1		09/14/12 00:00		

ANALYTICAL RESULTS

Project: MCES 120761
Pace Project No.: 10205364

Sample: GP-33-8 Lab ID: 10205364002 Collected: 09/11/12 10:30 Received: 09/13/12 14:29 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	2.4 mg/kg		0.44	0.11	1	09/15/12 07:27	09/17/12 14:37	7440-38-2	
Barium	41.4 mg/kg		0.44	0.018	1	09/15/12 07:27	09/17/12 14:37	7440-39-3	
Cadmium	0.13 mg/kg		0.044	0.018	1	09/15/12 07:27	09/17/12 14:37	7440-43-9	
Chromium	5.8 mg/kg		0.44	0.22	1	09/15/12 07:27	09/17/12 14:37	7440-47-3	
Lead	2.9 mg/kg		0.26	0.044	1	09/15/12 07:27	09/17/12 14:37	7439-92-1	
Selenium	ND mg/kg		0.66	0.15	1	09/15/12 07:27	09/17/12 14:37	7782-49-2	
Silver	ND mg/kg		0.44	0.053	1	09/15/12 07:27	09/17/12 14:37	7440-22-4	
7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.14 mg/kg		0.018	0.0055	1	09/14/12 11:18	09/17/12 09:46	7439-97-6	
Dry Weight Analytical Method: ASTM D2974									
Percent Moisture	3.4 %		0.10	0.10	1		09/14/12 00:00		

ANALYTICAL RESULTS

Project: MCES 120761
Pace Project No.: 10205364

Sample: GP-34-4 Lab ID: 10205364003 Collected: 09/11/12 10:45 Received: 09/13/12 14:29 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Lead	76.2 mg/kg		0.23	0.038	1	09/15/12 07:27	09/17/12 14:43	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	5.7 %		0.10	0.10	1		09/14/12 00:00		
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3550								
Acenaphthene	ND mg/kg		0.011	0.0053	1	09/14/12 07:20	09/15/12 21:22	83-32-9	
Acenaphthylene	0.055 mg/kg		0.011	0.0053	1	09/14/12 07:20	09/15/12 21:22	208-96-8	
Anthracene	0.050 mg/kg		0.011	0.0053	1	09/14/12 07:20	09/15/12 21:22	120-12-7	
Benzo(a)anthracene	0.29 mg/kg		0.011	0.00036	1	09/14/12 07:20	09/15/12 21:22	56-55-3	
Benzo(a)pyrene	0.34 mg/kg		0.011	0.00032	1	09/14/12 07:20	09/15/12 21:22	50-32-8	
Benzo(b)fluoranthene	0.52 mg/kg		0.021	0.0032	2	09/14/12 07:20	09/16/12 15:51	205-99-2	
Benzo(e)pyrene	0.29 mg/kg		0.011	0.00039	1	09/14/12 07:20	09/15/12 21:22	192-97-2	
Benzo(g,h,i)perylene	0.27 mg/kg		0.011	0.00035	1	09/14/12 07:20	09/15/12 21:22	191-24-2	
Benzo(k)fluoranthene	0.16 mg/kg		0.011	0.0012	1	09/14/12 07:20	09/15/12 21:22	207-08-9	
2-Chloronaphthalene	ND mg/kg		0.011	0.00027	1	09/14/12 07:20	09/15/12 21:22	91-58-7	
Chrysene	0.33 mg/kg		0.011	0.00034	1	09/14/12 07:20	09/15/12 21:22	218-01-9	
Dibenz(a,h)anthracene	0.081 mg/kg		0.011	0.00036	1	09/14/12 07:20	09/15/12 21:22	53-70-3	
Dibenzofuran	ND mg/kg		0.011	0.0053	1	09/14/12 07:20	09/15/12 21:22	132-64-9	
Fluoranthene	0.38 mg/kg		0.021	0.00079	2	09/14/12 07:20	09/16/12 15:51	206-44-0	
Fluorene	ND mg/kg		0.011	0.0053	1	09/14/12 07:20	09/15/12 21:22	86-73-7	
Indeno(1,2,3-cd)pyrene	0.23 mg/kg		0.011	0.00030	1	09/14/12 07:20	09/15/12 21:22	193-39-5	
1-Methylnaphthalene	ND mg/kg		0.011	0.0053	1	09/14/12 07:20	09/15/12 21:22	90-12-0	
2-Methylnaphthalene	ND mg/kg		0.011	0.0053	1	09/14/12 07:20	09/15/12 21:22	91-57-6	
Naphthalene	ND mg/kg		0.011	0.00019	1	09/14/12 07:20	09/15/12 21:22	91-20-3	
Phenanthrene	0.10 mg/kg		0.011	0.00030	1	09/14/12 07:20	09/15/12 21:22	85-01-8	
Pyrene	0.35 mg/kg		0.011	0.00040	1	09/14/12 07:20	09/15/12 21:22	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	72 %		30-125		1	09/14/12 07:20	09/15/12 21:22	321-60-8	
Terphenyl-d14 (S)	85 %		30-146		1	09/14/12 07:20	09/15/12 21:22	1718-51-0	

QUALITY CONTROL DATA

Project: MCES 120761

Pace Project No.: 10205364

QC Batch:	MERP/7503	Analysis Method:	EPA 7471
QC Batch Method:	EPA 7471	Analysis Description:	7471 Mercury
Associated Lab Samples:	10205364002		

METHOD BLANK: 1287287 Matrix: Solid

Associated Lab Samples: 10205364002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.020	09/17/12 09:07	

LABORATORY CONTROL SAMPLE: 1287288

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.47	0.46	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1287289 1287290

Parameter	Units	10205309008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Mercury	mg/kg	0.021J	.6	.56	0.62	0.55	101	95	80-120	12	20	

MATRIX SPIKE SAMPLE: 1287748

Parameter	Units	10205364002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg		0.14	.47	0.58	93	80-120

QUALITY CONTROL DATA

Project: MCES 120761

Pace Project No.: 10205364

QC Batch: MPRP/35175 Analysis Method: EPA 6010

QC Batch Method: EPA 3050 Analysis Description: 6010 MET

Associated Lab Samples: 10205364001, 10205364002, 10205364003

METHOD BLANK: 1288007 Matrix: Solid

Associated Lab Samples: 10205364001, 10205364002, 10205364003

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
Arsenic	mg/kg	ND	0.47	09/17/12 14:07	
Barium	mg/kg	ND	0.47	09/17/12 14:07	
Cadmium	mg/kg	ND	0.047	09/17/12 14:07	
Chromium	mg/kg	ND	0.47	09/17/12 14:07	
Lead	mg/kg	ND	0.28	09/17/12 14:07	
Selenium	mg/kg	ND	0.71	09/17/12 14:07	
Silver	mg/kg	ND	0.47	09/17/12 14:07	

LABORATORY CONTROL SAMPLE: 1288008

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Arsenic	mg/kg	46.3	42.3	91	80-120	
Barium	mg/kg	46.3	44.0	95	80-120	
Cadmium	mg/kg	46.3	41.7	90	80-120	
Chromium	mg/kg	46.3	44.1	95	80-120	
Lead	mg/kg	46.3	43.8	95	80-120	
Selenium	mg/kg	46.3	42.8	92	80-120	
Silver	mg/kg	23.1	20.8	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1288009 1288010

Parameter	Units	MS		MSD		MS	MSD	% Rec	% Rec	Max	
		10204310005	Spiked	Spiked	MSD					RPD	RPD
Arsenic	mg/kg	2.1	48.1	47.2	44.4	44.1	88	89	75-125	.6	30
Barium	mg/kg	365	48.1	47.2	579	414	445	104	75-125	33	30 D6,M1
Cadmium	mg/kg	0.12	48.1	47.2	43.3	42.8	90	90	75-125	1	30
Chromium	mg/kg	13.6	48.1	47.2	58.0	60.7	92	100	75-125	4	30
Lead	mg/kg	9.5	48.1	47.2	51.2	51.0	87	88	75-125	.3	30
Selenium	mg/kg	2.4	48.1	47.2	46.9	46.4	93	93	75-125	1	30
Silver	mg/kg	ND	24	23.6	22.0	21.7	92	92	75-125	1	30

QUALITY CONTROL DATA

Project: MCES 120761

Pace Project No.: 10205364

QC Batch: MPRP/35179

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 10205364001, 10205364002, 10205364003

SAMPLE DUPLICATE: 1288240

Parameter	Units	10205364001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.1	14.6	4	30	

QUALITY CONTROL DATA

Project: MCES 120761

Pace Project No.: 10205364

QC Batch: OEXT/19688

Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3550

Analysis Description: 8270 Solid PAH by SIM MSSV

Associated Lab Samples: 10205364003

METHOD BLANK: 1287498

Matrix: Solid

Associated Lab Samples: 10205364003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.010	09/15/12 18:21	
2-Chloronaphthalene	mg/kg	ND	0.010	09/15/12 18:21	
2-Methylnaphthalene	mg/kg	ND	0.010	09/15/12 18:21	
Acenaphthene	mg/kg	ND	0.010	09/15/12 18:21	
Acenaphthylene	mg/kg	ND	0.010	09/15/12 18:21	
Anthracene	mg/kg	ND	0.010	09/15/12 18:21	
Benzo(a)anthracene	mg/kg	ND	0.010	09/15/12 18:21	
Benzo(a)pyrene	mg/kg	ND	0.010	09/15/12 18:21	
Benzo(b)fluoranthene	mg/kg	ND	0.010	09/15/12 18:21	
Benzo(e)pyrene	mg/kg	ND	0.010	09/15/12 18:21	
Benzo(g,h,i)perylene	mg/kg	ND	0.010	09/15/12 18:21	
Benzo(k)fluoranthene	mg/kg	ND	0.010	09/15/12 18:21	
Chrysene	mg/kg	ND	0.010	09/15/12 18:21	
Dibenz(a,h)anthracene	mg/kg	ND	0.010	09/15/12 18:21	
Dibenzofuran	mg/kg	ND	0.010	09/15/12 18:21	
Fluoranthene	mg/kg	ND	0.010	09/15/12 18:21	
Fluorene	mg/kg	ND	0.010	09/15/12 18:21	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.010	09/15/12 18:21	
Naphthalene	mg/kg	ND	0.010	09/15/12 18:21	
Phenanthrene	mg/kg	ND	0.010	09/15/12 18:21	
Pyrene	mg/kg	ND	0.010	09/15/12 18:21	
2-Fluorobiphenyl (S)	%	59	30-125	09/15/12 18:21	
Terphenyl-d14 (S)	%	83	30-146	09/15/12 18:21	

LABORATORY CONTROL SAMPLE: 1287499

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	.033	0.021	62	45-125	
2-Chloronaphthalene	mg/kg	.033	0.025	75	51-125	
2-Methylnaphthalene	mg/kg	.033	0.022	65	48-125	
Acenaphthene	mg/kg	.033	0.024	71	48-125	
Acenaphthylene	mg/kg	.033	0.023	68	47-125	
Anthracene	mg/kg	.033	0.026	77	55-125	
Benzo(a)anthracene	mg/kg	.033	0.027	80	57-125	
Benzo(a)pyrene	mg/kg	.033	0.028	83	63-125	
Benzo(b)fluoranthene	mg/kg	.033	0.029	86	52-125	
Benzo(e)pyrene	mg/kg	.033	0.031	93	70-130	
Benzo(g,h,i)perylene	mg/kg	.033	0.032	97	59-125	
Benzo(k)fluoranthene	mg/kg	.033	0.031	93	60-125	
Chrysene	mg/kg	.033	0.029	87	62-125	
Dibenz(a,h)anthracene	mg/kg	.033	0.033	100	60-125	

Date: 09/18/2012 05:59 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MCES 120761

Pace Project No.: 10205364

LABORATORY CONTROL SAMPLE: 1287499

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibenzofuran	mg/kg	.033	0.026	77	58-125	
Fluoranthene	mg/kg	.033	0.032	95	63-125	
Fluorene	mg/kg	.033	0.025	75	54-125	
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.032	95	57-125	
Naphthalene	mg/kg	.033	0.022	67	46-125	
Phenanthrene	mg/kg	.033	0.025	75	53-125	
Pyrene	mg/kg	.033	0.028	86	63-125	
2-Fluorobiphenyl (S)	%			66	30-125	
Terphenyl-d14 (S)	%			87	30-146	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1287500 1287501

Parameter	Units	10205309008		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max		
		Result	Spike Conc.	Spike Conc.	Result				RPD	RPD	Qual
1-MethylNaphthalene	mg/kg		.039	.039	0.023	0.022	58	54	44-125	7	30
2-Chloronaphthalene	mg/kg		.039	.039	0.028	0.027	71	68	50-125	4	30
2-MethylNaphthalene	mg/kg		.039	.039	0.024	0.022	61	57	38-125	7	30
Acenaphthene	mg/kg	ND	.039	.039	0.027	0.024	69	61	30-150	11	30
Acenaphthylene	mg/kg	ND	.039	.039	0.025	0.024	64	61	30-127	4	30
Anthracene	mg/kg	ND	.039	.039	0.029	0.028	74	72	30-150	3	30
Benzo(a)anthracene	mg/kg	ND	.039	.039	0.030	0.028	75	72	30-128	5	30
Benzo(a)pyrene	mg/kg	ND	.039	.039	0.032	0.031	80	77	30-130	4	30
Benzo(b)fluoranthene	mg/kg	ND	.039	.039	0.031	0.030	79	76	30-131	3	30
Benzo(e)pyrene	mg/kg		.039	.039	0.034	0.033	85	82	61-125	4	30
Benzo(g,h,i)perylene	mg/kg	ND	.039	.039	0.035	0.034	88	85	30-149	4	30
Benzo(k)fluoranthene	mg/kg	ND	.039	.039	0.034	0.034	85	85	30-149	.9	30
Chrysene	mg/kg	ND	.039	.039	0.029	0.030	74	76	30-150	3	30
Dibenz(a,h)anthracene	mg/kg	ND	.039	.039	0.036	0.035	90	89	30-150	1	30
Dibenzofuran	mg/kg		.039	.039	0.029	0.027	73	69	53-125	6	30
Fluoranthene	mg/kg	ND	.039	.039	0.036	0.035	89	87	30-150	2	30
Fluorene	mg/kg	ND	.039	.039	0.029	0.028	74	69	40-125	6	30
Indeno(1,2,3-cd)pyrene	mg/kg	ND	.039	.039	0.035	0.034	88	85	30-150	4	30
Naphthalene	mg/kg	ND	.039	.039	0.024	0.023	61	57	32-125	7	30
Phenanthrene	mg/kg	ND	.039	.039	0.029	0.027	73	68	30-134	6	30
Pyrene	mg/kg	ND	.039	.039	0.032	0.030	81	76	30-150	7	30
2-Fluorobiphenyl (S)	%						64	61	30-125		
Terphenyl-d14 (S)	%						79	77	30-146		

QUALIFIERS

Project: MCES 120761
Pace Project No.: 10205364

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MCES 120761
 Pace Project No.: 10205364

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10205364001	GP-33-4	EPA 3050	MPRP/35175	EPA 6010	ICP/14340
10205364002	GP-33-8	EPA 3050	MPRP/35175	EPA 6010	ICP/14340
10205364003	GP-34-4	EPA 3050	MPRP/35175	EPA 6010	ICP/14340
10205364002	GP-33-8	EPA 7471	MERP/7503	EPA 7471	MERC/8359
10205364001	GP-33-4	ASTM D2974	MPRP/35179		
10205364002	GP-33-8	ASTM D2974	MPRP/35179		
10205364003	GP-34-4	ASTM D2974	MPRP/35179		
10205364003	GP-34-4	EPA 3550	OEXT/19688	EPA 8270 by SIM	MSSV/8564



Document Name:
Sample Condition Upon Receipt Form

Document Revised: 22Aug2012
Page 1 of 1
Issuing Authority:
Pace Minnesota Quality Office

Sample Condition
Upon Receipt

Client Name:

Project #:

SCH

WO# : 10205364

Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Tracking Number:



10205364

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Optional: Proj. Due Date: Proj. Name:

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermometer Used: 1B86A912167504 80512447 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature: *4.2* Biological Tissue Frozen? Yes No Date and Initials of Person Examining Contents: *ESIG-13-12*
Temp should be above freezing to 6°C

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Correct Containers Used? -Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: <i>SL</i>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: *Phin Borgschulte*

Date/Time: *9/14/12*

Comments/Resolution:

RUSH requested

Project Manager Review:

OKE

Date:

9/14/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



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